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ABSTRACT

This handbook is a "how to do it" set of definitions, instruments, and procedures based on program effectiveness and related costs (PERC) evaluation at Empire State College (Saratoga Springs, New York) and four other cooperating institutions. The handbook focuses first on program effectiveness and then considers program costs. It utilizes a multiple perspectives strategy containing five essential parts: multiple observers of student learning; multiple methods of assessing student learning; multiple standards for evaluating student learning; multiple decision-makers utilizing data relevant to the policy questions they face; and multiple time-periods for measuring change in student learning. The handbook is organized into five sections: (1) an overview of the complete PERC framework; (2) key dimensions of PERC: multiple perspectives strategy, outcome-cost relationship, and effectiveness; (3) a tool box of instruments and discussions of how to adapt and use them, with suggestions on goal identification and sampling; (4) approaches to PERC data analysis; and (5) data application and use. An appendix contains a program completion questionnaire, student biographical inventory, graduate followup questionnaire, student experience questionnaire, faculty rating form, student rating form, and faculty questionnaire. Includes 52 references. (JDD)

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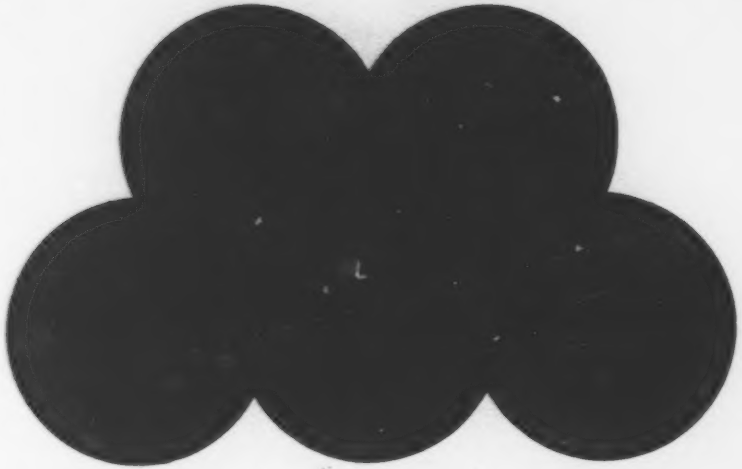

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PERC
HANDBOOK

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PERC HANDBOOK

(Program Effectiveness and Related Costs)

Ernest G. Palola
Timothy Lehmann
A. Paul Bradley, Jr.
Richard Debus

Office of Research & Evaluation
Empire State College
Saratoga Springs, New York

January 1977

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PREFACE

This *Handbook* is not finished, it will probably never be. It is not a "product" but a "chronicle on process." Through time and revisions, concepts and procedures will be clarified; and new ideas, new emphases, and new information will be added.

Certain ideas are central to the *Handbook* and are summarized here to orient readers of the *Handbook* to its basic features:

First, *the work presented in this Handbook would normally be categorized as cost/effectiveness evaluation. We have purposely rejected this language; instead, we use the phrase program effectiveness and related costs (PERC).* Cost studies are pervasive in higher education and, as commonly used, overlook or totally ignore the evaluation of programs. The research strategy described in this *Handbook* is revolutionary in that it focuses first on program effectiveness and then asks, how much does the program cost. We want to reverse current planning and decision-making processes in postsecondary education - from cost first, program second (but often not discussed or studied), to program first, cost second.

Second, *a "multiple perspectives strategy" to PERC evaluation is presented in this Handbook.* The strategy contains five essential parts: multiple *observers* of student learning, multiple *methods* of assessing student learning, multiple *standards* for evaluating student learning, multiple *decision-makers* utilizing data relevant to the policy questions they face, and multiple *time-periods* for measuring change in student learning.

Third, *the Handbook is a "how to do it" set of definitions, instruments, and procedures based on PERC evaluation at Empire State College and four other cooperating institutions.* Efforts are made, however, to incorporate in this *Handbook* experience from a broader range of institutional settings and to comment on issues of application to other educational settings. It is our intent to generalize the *Handbook* for adaptation and application at other institutions, traditional and nontraditional. Present project plans call for the use of ESC-derived instruments at a range of other institutions during 1974 to 1977. With this experience, the *Handbook* can be modified to apply more readily and accurately at institutions other than ESC.

And fourth, *PERC studies reinforce institutional self-study and analysis, provide added data for administrative and faculty decision-making, and report program effectiveness and related cost in terms of institutional mission and role.* The prime focus of PERC is a better understanding of student learning and program costs within specific institutions. It is not the purpose of PERC, at this time, to develop *standards* on a state, regional, or national level.

The *Handbook* is organized into five sections.

Chapter 1: Gives overview of the complete PERC framework. Will be useful especially for people who want a cursory look at the framework, its rationale, the instruments, and some uses.
Chapter 2: Discusses key dimensions of PERC: multiple perspectives strategy, outcome-cost relationship, and effectiveness.
Chapter 3: Is a tool box of instruments and discussions of how to adapt and use them. Also includes suggestions on goal identification and sampling.
Chapter 4: Describes approaches to PERC data analysis, and provides illustrations.
Chapter 5: Looks at data application and use. Illustrates with actual PERC data.

Although PERC was developed at Empire State College, a statewide, public institution that stresses contract learning and individual programs of study, it has already been adapted to other settings. Thus, one should not be deterred by the uncommon elements in the questionnaires or other data-gathering techniques.

As with many major research efforts, joint cooperation among various groups is essential. ESC staff and administration have made substantial contributions to PERC, and SUNY-Central has given support at various crucial points in the project's evolution. In addition, the development, formulation, and testing of PERC has received significant federal support over a three year period from the Fund for the Improvement of Postsecondary Education. Virginia Smith and Chuck Bunting at FIPSE have provided continued interest, support, and commitment to PERC.

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virginia smith, charles bunting

Empire State College

Faculty, Students, Administrators

Research Advisory Committee

jane dahlberg, george dawson, ginny lester,
larry lipsett, emmett murphy, mike plumer,
george rawick, gerry sircus, betsy steltenpohl

Office of Research and Evaluation

shirley bishop, virginia brown, carol conway,
judy dingman, judy dober, margie kraus,
loralee pyryemybida, morris sunshine

College Editor

carolyn jenkins

Printing Office

janet jones, ron kosiba, ray lynch

Cooperating Institutions

Hampshire College

daniel keegan

Northland College

harvey haukaas, jan witthuhn

State University of New York College at Plattsburgh

william dempsey, leif hartmark

University of Wisconsin-Green Bay

allan hartley

Project Evaluation Team

dennis gooler, University of Mid-America
barry morstain, University of Delaware
virginia radley, State University of New York College at Oswego
john shea, University of California-Berkeley
ed stevens, Lyndon State College

Project Consultants

bruce francis, State University of New York at Buffalo
eugene hartley, University of Wisconsin-Green Bay
jack lindquist, Empire State College
joseph westerheide, University of Oklahoma

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CHAPTER 1
PERC: AN OVERVIEW

In postsecondary education many studies of student learning and college impact as well as studies of college costs have been made (see Bibliography at the end of this *Handbook*). But we still remain caught in a trap: the focus is on costs first and foremost, and rarely are cost studies integrated with effectiveness studies. This *Handbook*, therefore, seeks to do two things: (1) provide a framework whereby assessments of educational effectiveness and associated costs are integrated, and (2) reverse the priorities that put costs above effectiveness. This framework will provide, then, data for better-informed decision-making.

Even with the number of effectiveness and cost studies, there are still design and use problems. Most research on educational effectiveness does not explore significant learning outcomes; and often the learning outcomes studied are examined in highly standardized and unidimensional ways, generally using commercially available tests, questionnaires, and attitudinal surveys. Such strategies cannot deal adequately with individual educational programs like Empire State College, which emphasize student goals and objectives. Furthermore, such strategies do not fully assess "value added" by an institution or program (Micek and Wallhaus, 1973; Hartnett, 1974; Astin, 1975). A second problem with effectiveness research is that few studies of student outcomes successfully link change or development to the program or institutional learning experiences. Two exceptions are the Bennington College studies (Newcomb, 1943; Newcomb, *et al.*, 1967) and more recent work at Harvard (Perry, 1968). Both approaches used case study analysis to build a linkage between the program and resultant student change.

As serious as are the design problems with most effectiveness research, the ways in which cost studies often are used is even more serious. Much data is available describing costs: per credit hour, per FTE student, per degree produced, and so on. But little is said in these studies about what students actually learn, the *raison d'etre* of education. With this abundance of cost data readily available, there is a noticeable tendency to use the "lowest-common-denominator method" of decision-making: to choose strictly on the basis of what is less expensive. Almost any student of higher education can cite examples of the lowest-common-denominator method leading to the demise of an educational program. Expediency-based solutions to complex problems will not, however, suffice.

There is much concern among the general public, state officials, parents of students, and students themselves that something is wrong with higher education. They ask why college costs so much and what are the benefits of study. Some even suggest that colleges seem to know the cost of everything and the value of nothing, for few, if any, institutions can convincingly demonstrate that their educational programs have important impacts on students. In fact, most institutions cannot provide accurate and meaningful information that goes beyond such familiar measures as grade-point averages, Graduate Record Examination scores, and cost per credit hour. Higher education's public demands better. *Our major challenge, is to build evaluation frameworks that first of all spell out various effectiveness measures and then relate cost data.*

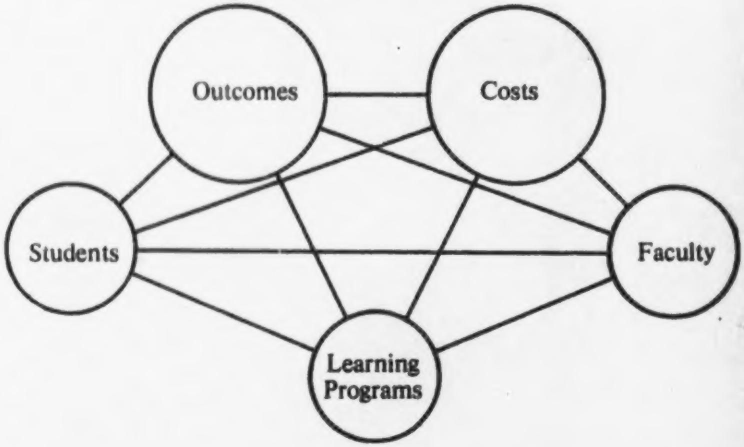
Undergraduate teaching institutions have a particularly great need to demonstrate results. Institutions classified in this group are the community colleges, independent junior colleges, small liberal arts colleges, state colleges, and nontraditional colleges. With the exception of the community colleges, all have faced severe fiscal difficulty in the late '60s and early '70s and sometimes reacted with a lowest-common-denominator approach. The undergraduate teaching institutions must learn to link educational assessments with meaningful cost data so they can plan in a way that will improve their educational programs; attract rather than lose students; and stop, slow down, or compensate for waning public support.

This initial chapter briefly describes the Program Effectiveness and Related Costs (PERC) framework being developed and implemented by the Office of Research and Evaluation at Empire State College of the State University of New York. It is also being adapted by State University of New York College at Plattsburgh; University of Wisconsin at Green Bay; Northland College, Ashland, Wisconsin; and Hampshire College, Amherst, Massachusetts. PERC takes seriously the problem of marrying effectiveness and cost efforts into a coherent, powerful, and integrated package that can be adapted to any undergraduate teaching institution. PERC may or may not help lower costs or improve outcomes, but it will certainly provide data for better informed decision-making.

A FRAMEWORK FOR INTEGRATION: PROGRAM EFFECTIVENESS AND RELATED COSTS

What the weaknesses in available studies lead us to propose is a program effectiveness and related costs strategy that focuses on the master question — *what kinds of students working with what kinds of faculty in what kinds of learning programs change in what ways at what cost?* (See Figure 1.)

Figure 1
The Five Elements of PERC



The first component of this framework is outcomes. Each college must identify its own set of outcomes appropriate to the kinds of students it attracts and the kinds of educational programs it offers. Colleges must specify what their students are trying to attain, what the college is trying to achieve, and what kinds of learning programs will produce these outcomes.

At Empire State we start by defining outcomes based on student needs and objectives. Each student designs an individual degree program (see Glossary) that provides the basis for measuring outcomes. The PERC framework classifies individual student objectives into eight outcome categories. These categories are substantive knowledge, communication skills, cognitive, developmental, personal, occupational, public service, and unanticipated. To illustrate, substantive knowledge is the level of competence achieved within the context of a student's goals; cognitive outcomes include comprehension, analysis, evaluation, synthesis, and application; and developmental outcomes cover interpersonal competence, awareness, clarifying purposes, self-understanding, and self-consistency. We think this classification of outcomes is comprehensive and includes most key dimensions across different institutional types. Individual institutions may, however, select their own set of particular outcomes and measure them in ways suitable to their educational program. For instance, the University of Wisconsin at Green Bay is studying these outcomes but also adding other objectives that are directly related to that University's concern to develop skills in solving environmental problems.

Turning to the cost area, there are essential features of the PERC cost framework that differ from other cost systems. First, it has been developed to supplement the educational effectiveness framework: cost data is developed around and reported in relation to the educational effectiveness measures. Second, the framework is triggered by the individual student's learning experiences rather than by some budgetary formula (e.g., FTE students or credit hours). Third, the framework requires the inclusion of certain costs that are optional or missing in other systems (e.g., in-kind contributions of services, facilities, materials, and programs). Fourth, PERC treats the cost of the development of locations, learning resources, and programs as deferred assets. Fifth, portions of faculty salaries devoted to administration are assigned as overhead, not as direct instructional cost. At Empire State, average salaries are calculated across organizational units of the College in order to minimize peculiarities in age, rank and salary of staff at a given location.

Although the PERC framework differs from other cost systems in the above ways, the framework has been constructed so that reports may be comparable with most other cost frameworks, including the major efforts of the National Center for Higher Education Management Systems (NCHEMS), (Debus, 1974). By summing the appropriate individual student costs developed through PERC, reports can be based on more conventional cost analysis units: FTE, credit hours, major, and so on.

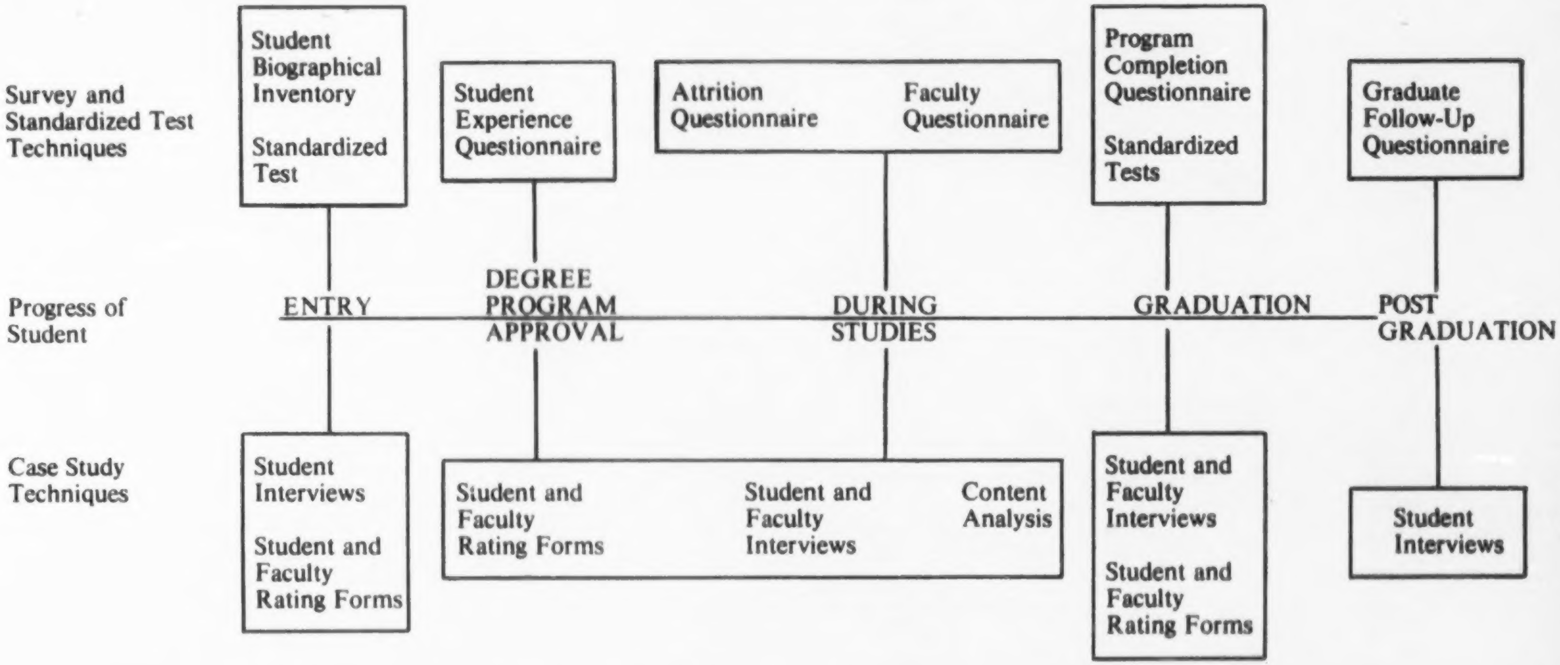
RESEARCH DESIGN AND INSTRUMENTS

The longitudinal PERC design (Figure 2) calls for a variety of surveys and case study techniques in concert throughout the study. This strategy provides the necessary multiple measures at each stage to create *chains of evidence* on where a college or program is having effects and where not (Campbell and Fiske, 1959; Sieber, 1973).

Initial measures are taken on student entrance. At this time a Student Biographical Inventory (SBI) is administered to a large group. The SBI provides a clear picture of the characteristics of incoming students, their learning styles, and their goals. In a scheme defining effectiveness as goal attainment, the SBI is vital. The Educational Testing Service (ETS) Undergraduate Program Area Tests, or some comparable tests, are used to provide a test picture of student intellectual attainment. These instruments are supplemented by case study techniques: student interviews plus student and faculty rating forms. The interviews allow thorough discussion of complicated responses, while the rating forms further delve into where entering students are in terms of important cognitive dimensions (ability to analyze, synthesize, and apply learning to other settings) and in terms of areas of personal development (purpose, awareness, and self-understanding). The rating forms can be adapted fairly easily to most institutions' goals and objectives for students.

During their studies, it is useful to look again at students to see what changes are occurring and why. Much research on students in college (Newcomb, 1943; Katz, 1968; Perry, 1968; Feldman and Newcomb, 1969; Hartnett, 1974) indicates that the greatest changes often occur in the first year or so of study. To find out whether this generalization is true for the adult students at Empire State, PERC strategy calls for identifying such change as close as possible to where it occurs through administration of a Student Experience Questionnaire (SEQ). This instrument examines whether students have changed their educational objectives, how they are reacting to the educational program, what is the nature of their degree program, and what kinds of learning resources they are finding useful. This questionnaire is again supplemented by interviews, with students and faculty, plus content analysis of student documents, a technique for objectively analyzing papers, journals, and the like (Berelson, 1954; Holsti, 1968). At Empire State, when used over time, this method will help especially in identifying student growth in cognitive skills. Rating forms also will be used again

Figure 2
PERC Longitudinal Design


Survey and Standardized Test Techniques
Student Biographical Inventory
Standardized Test
Student Experience Questionnaire
Attrition Questionnaire
Faculty Questionnaire
Program Completion Questionnaire
Standardized Tests
Graduate Follow-Up Questionnaire
Progress of Student
ENTRY
DEGREE PROGRAM APPROVAL
DURING STUDIES
GRADUATION
POST GRADUATION
Case Study Techniques
Student Interviews
Student and Faculty Rating Forms
Student and Faculty Rating Forms
Student and Faculty Interviews
Content Analysis
Student and Faculty Interviews
Student and Faculty Rating Forms
Student Interviews

at this stage to identify change. In addition, plans call for administration of an Attrition Questionnaire (AQ) and a Faculty Questionnaire (FQ). The former investigates possible positive or negative effects of study for dropouts; the latter recognizes the importance of faculty goal attainment to long term program effectiveness and explores such things as backgrounds, motivations, views of the program, workload questions, participation in governance, career orientation, professional development, and perceived outcomes for faculty.

At graduation, a Program Completion Questionnaire (PCQ), which mirrors the SBI, is administered to see if students think their goals were achieved and why. Another round of standardized tests, the ETS Undergraduate Program Aptitude and Field Tests or some comparable tests, confirm or deny these perceptions in intellectual areas, while rating forms and interviews with students and faculty again provide substantiating links in the *chains of evidence*. If an institution wants to get a yearly or even a semester picture of student progress, these instruments can be given at the beginning, middle, and end of the year or semester.

Two or so years after graduation, a Graduate Follow-Up Questionnaire (GFQ) examines various academic, vocational, personal, and public-services outcomes of the program. It also asks if perceptions of the program have changed and if so, how. A few interviews will also supplement the survey findings at this stage.

In sum, the research design calls for survey instruments reinforced by case study techniques. This strategy provides *chains of evidence* to link up student learning and change with the educational program and its related costs. Such a strategy overcomes a major defect of previous studies as college specific effects are sorted out from noncollege general effects. (See Chapter 3 for a more detailed description of the PERC research design.)

SAMPLING

There is no one right sample design for all research. There are, however, simple and effective designs for a given set of problems such as those created by the PERC framework. The key to identifying an appropriate sampling strategy is to think through the entire planned study from inception to analysis and use. This preliminary work may save much extraneous effort, for the sampling design should reflect the research questions to be answered. For example, if the basic aim is to find out whether a given department is measuring up in relation to the rest of the institution, a stratified sample that draws equal or proportionate numbers of students from several departments may be appropriate. If, however, the aim is to look at the institution as a whole, a simple random sample or systematic random sample (e.g., pick every fifth person on a list) should suffice. Another possibility in this case is to cluster (e.g., study everyone in a given dorm), but this technique generally requires substantial cross-checking to ensure against unintended systematic exclusion of important groups whose inclusion might alter the findings. Again, pick the method that accomplishes the task of providing representation of a population with the least amount of effort.

The size of the sample also depends on the questions to be answered and the analysis plan. If one wishes to study the perceived outcomes of married female and male students majoring in elementary education, health sciences, and business to see which program is having the greatest effects on which kinds of students, it is important to know before sampling what are the size requirements of the statistical test of significance chosen. A total sample size of 50 would not be sufficient to deal with such a complex research problem, although 100, if stratified to focus on the key variables, would be enough for many statistical tests.

The PERC design is longitudinal (i.e., we follow the same group of students over time), which helps define certain requirements of the sampling strategy. Also, using a variety of instruments necessitates subsampling strategies. In general, PERC requires a large enough sample of students so that: (a) it is representative of important features of the population (e.g., sex ratio, full-/or part-time status, area of study); (b) there is adequate allowance for attrition over time; and (c) the requirements of multivariate statistical techniques can be met. Figure 3 describes the PERC sampling strategy that meets these conditions.

The Student Biographical Inventory (SBI), which is administered to all incoming students, provides the population base for later questionnaires and case sampling. A 500-person base is adequate for most analyses. If an institution decides to test some hypotheses regarding student typologies that can be identified in the SBI, the sample should be selected so that the 500 are stratified equally into each student type. The 20 percent (100-person) subsample who will take standardized tests and be studied intensively through case study techniques should also contain equal numbers from each type. Institutions may wish to stratify samples differently (e.g., by areas of study) or to use random sampling techniques.

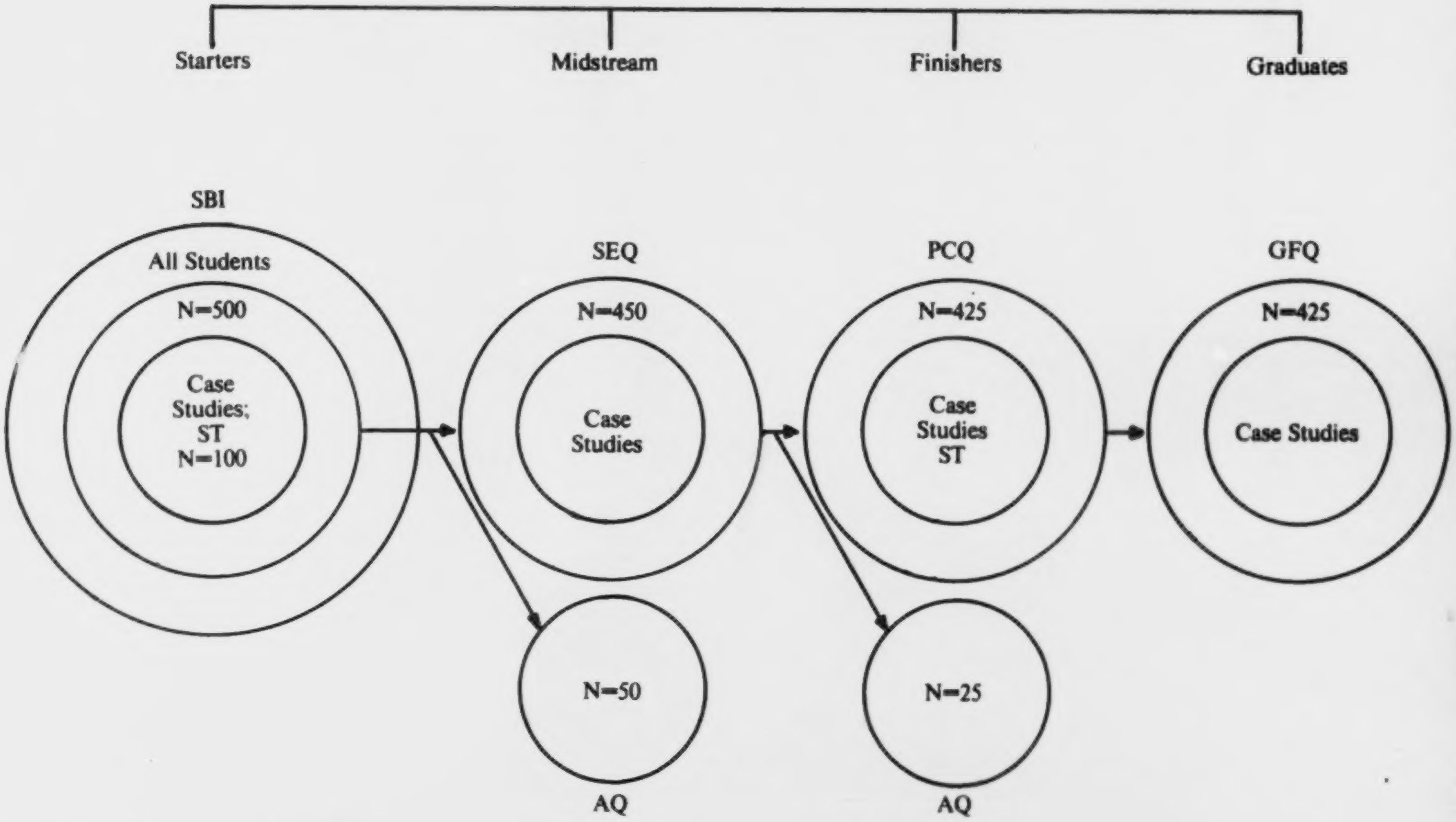
During studies, some students drop out. Who they are, what they got out of college, and why they leave are vital information for evaluating effectiveness. The Attrition Questionnaire (AQ) goes to all dropouts from the sample. In addition, any dropouts who were originally selected for case study analysis should be interviewed. The remaining students from the original main sample (450 estimated) receive the Student Experience Questionnaire (SEQ) at some point during their studies. At Empire State, it is when they register their individual degree program. At that time, the case study respondents also will be queried again. Other institutions will undoubtedly use a different midstream point at which to "drop anchor," such as the end of a semester or perhaps the sophomore year, to look at student experiences. The graduation and postgraduate sampling will follow along similar lines, though only a limited number of interviews are planned for alumni.

There are comparison groups at each stage of the longitudinal design. At entrance, since all incoming students received the SBI, certain variables in the sample will be matched against the entire entering student group. For example, you might ensure that the sample has the same proportions of female, minority, over 50, married, and low socioeconomic students as does the student population. This control will reduce the likelihood of systematic error. At successive stages, modest sized groups should be selected at random from the student body to allow comparison with the subsamples.

The Faculty Questionnaire is administered annually to all faculty. This questionnaire provides much other useful data on faculty style, how they relate to students, changes in attitudes, and the like. Patterns discovered will help explain findings for some of the other instruments.

Although there are more complicated sampling strategies that could be employed, the above fits the needs of PERC. (See Chapter 3 for further information on PERC sampling.)

Figure 3
Sampling Strategy: A Longitudinal Approach


Starters
Midstream
Finishers
Graduates
SBI
All Students
N=500
Case Studies; ST N=100
SEQ
N=450
Case Studies
PCQ
N=425
Case Studies ST
GFQ
N=425
Case Studies
N=50
AQ
N=25
AQ

SBI = Student Biographical Inventory
SEQ = Student Experience Questionnaire
PCQ = Program Completion Questionnaire
GFQ = Graduate Follow-Up Questionnaire
AQ = Attrition Questionnaire
ST = Standardized Tests

STRATEGIES AND TACTICS FOR PERC ANALYSIS

The basic strategy in PERC analyses is to reduce the complex variety of data into forms understandable and meaningful to several audiences. This strategy for analysis generally means straightforward descriptive reports and presentations, although the actual analyses leading to the reports may be complex. The reports may look at any of the five parts in the PERC framework or at the relationships among them, depending on the needs and interests of the audience.

PERC suggests three steps for analysis (see Chapter 4): identifying the functions of variables, reducing data, and multivariate analysis. Identifying the functions of all variables is done prior to any data manipulation. The type and format of analysis conducted depend on this step. PERC uses three functions for variables: classification (which separates subjects into age, sex, etc. groups for further analysis), description (which elaborates and clarifies relationships), and outcome (which helps describe achievement of goals).

Reducing data, the second step of analysis, involves comparing the describer and outcome variables across the various levels of the classification variables. Cross tabulation or analysis of variance, which can lead immediately to useful reports, is suggested. In addition, by looking at the relationships among these variables, one can remove from later data analyses those that do not help distinguish the groups. Two other techniques in reducing data are scale construction through weighting of responses and factor analysis. Both can reduce a group of similar variables to a small number of constructs that represent the effects of this larger group. An example might be a faculty "satisfaction" score. These one or two or three construct variables can thus replace the larger group in later analyses which makes the statistical process easier. Furthermore, the constructs themselves can usually be described in understandable ways to any PERC audience in interesting and useful reports.

The third step, multivariate analysis, is especially important in linking the different kinds of data into *chains of evidence*. Although there are several possible methods, PERC recommends a multivariate discriminant analysis, which maximizes the differences among categories of a classification variable. Again, the final products can be translated into simple presentation formats.

Overall, the PERC analysis suggestions are flexible and interpretable at any stage for preparing descriptive, easily understood reports. The analysis focuses on the outcomes-costs linkage in relationship to student, faculty, and programmatic dimensions.

STRATEGIES FOR DATA DISSEMINATION AND USE

PERC data is meant to aid critical self-examination and to improve the teaching-learning process. Therefore, dissemination and application become as complex and time consuming as data generation and analysis. Far too often research energies and college resources are spent in the collection of data, assuming that campus decision-makers are eagerly awaiting the results and will put data to immediate use. Substantial experience tells us, however, that mere reporting of data will not lead to its use unless the data confirm the user's beliefs (Havelock, 1970; Rodgers and Shoemaker, 1971; Palola, *et al.*, 1974; and Lindquist, 1975).

PERC recommends varied formats oriented to policy questions raised by multiple audiences. For example, the institution's administrative officers, who are the primary audience, will probably respond best to straightforward presentations of effectiveness and cost findings. On the other hand, a policy committee might want much detail concerning methodology, qualitative findings, apparent patterns, and the like. At another level, a given department might want a verbal presentation discussing its students in relation to those in similar departments. (See Chapter 5 for a more detailed look at the data dissemination question.)

In sum, PERC is a comprehensive framework for examining postsecondary program effectiveness and related costs. The remainder of this *Handbook* details all elements of the framework beginning with a discussion of PERC's distinctive features.

CHAPTER 2
DISTINCTIVE FEATURES OF PERC

There are some distinctive features that characterize the PERC framework as different from other frameworks. These features — a multiple perspectives strategy, a goal-attainment approach, design options — require discussion before turning to the instruments for assessing program effectiveness and related costs.

A MULTIPLE PERSPECTIVES STRATEGY

The multiple perspectives strategy developed for the PERC framework rests on five components: multiple *observers* of student learning, multiple *methods* of assessing student learning, multiple *standards* for evaluating student learning, multiple *decision-makers* utilizing data relevant to the policy questions they face, and multiple *time-periods* for measuring change in student learning. The last component named is dealt with at some length later in this chapter. This strategy focuses evaluation on student learning, generates data from a variety of sources, and defines a critical role for a research office. This office is the focal point for gathering data, but also for synthesizing and reporting data in formats that serve the needs of various decision-makers.

The multiple perspectives strategy developed for the PERC framework is shown in Figure 4. An important concern of PERC is to utilize a variety of data collection *methods*. Student learning and growth is a complex process, not yet well understood, so reliance on a single method of data collection is risky. For example, test scores provide, according to many, a reasonable estimate of cognitive achievement. But, at best, tests look at student mastery of content. Better also to find other methods to measure student learning. Interviews, rating forms, survey instruments, content analysis, observation and tests are all important tools for obtaining a full picture of what is happening to students. Multiple methods make use of both qualitative as well as quantitative techniques (Campbell, 1975). The aim is to develop *chains of evidence* of where program impacts have occurred.

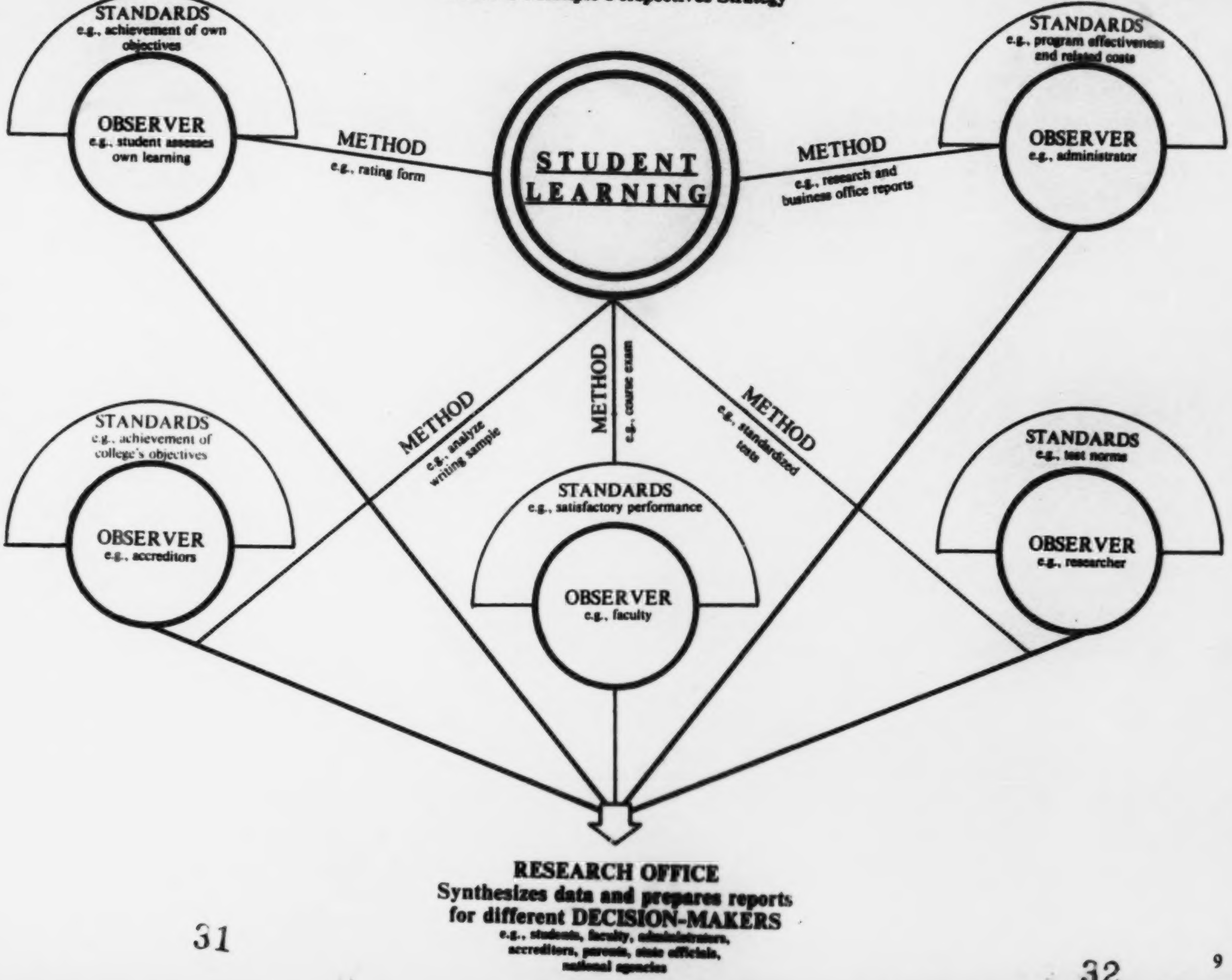


Figure 4
PERC'S Multiple Perspectives Strategy

STANDARDS
e.g., achievement of own objectives
OBSERVER
e.g., student assesses own learning
METHOD
e.g., rating form
STUDENT LEARNING
METHOD
e.g., research and business office reports
STANDARDS
e.g., program effectiveness and related costs
OBSERVER
e.g., administrator
STANDARDS
e.g., achievement of college's objectives
OBSERVER
e.g., accreditors
METHOD
e.g., analyze writing sample
METHOD
e.g., course exam
METHOD
e.g., standardized tests
STANDARDS
e.g., satisfactory performance
OBSERVER
e.g., faculty
STANDARDS
e.g., test norms
OBSERVER
e.g., researcher
RESEARCH OFFICE
Synthesizes data and prepares reports for different DECISION-MAKERS
e.g., students, faculty, administrators, accreditors, parents, state officials, national agencies

Multiple *observers* and multiple *standards* are key components to a multiple perspectives strategy. While faculty traditionally assess student learning and program effectiveness, students and others including educational researchers also can provide richness to an evaluation. Since effectiveness is often in the eyes of the beholder, multiple observers applying their own standards are important to informed decision-making.

Overall, the multiple perspectives approach posits certain common evaluations that will be reflected in the various research techniques as well as certain unique judgments that may reflect the particular vantage points and knowledge of a given evaluator. This approach conceptualizes the learning/teaching process as complex, interactive, and unique but also patterned. As a result, for certain kinds of students working with certain kinds of faculty, there ought to be identifiable common outcomes. The multiple perspectives approach should be able to reveal them. The researchers task is then to present them in understandable and convincing ways to the variety of *decision-makers.*

A GOAL-ATTAINMENT APPROACH

The PERC framework rests on a goal-attainment approach to the study of educational effectiveness. The goal-attainment approach requires a clear identification and specification of goals, the conversion of goals into measurable outcomes, and an assessment of effectiveness by determining the degree of success or failure encountered by students and the program in reaching predetermined objectives.

Goals

There are many ways to identify, conceptualize, and measure educational goals (Feldman and Newcomb, 1969; Lawrence, *et al.*, 1970; Micek and Wallhaus, 1973; Lenning, 1974; Astin, 1974; and Bowen, 1974). Since the goal-attainment approach assumes that student goals and college educational objectives are relatively clear, well-defined, and somewhat specific, we must recognize at the outset that goals in higher education are problematic. Goal definition and specification is a complex task because most often goals are intangible, ambiguous, multiple in nature; they frequently conflict; they vary by organizational level; and they often change (Etzioni, 1960; Thompson and McEwen, 1958; Perrow, 1961; Gross, 1968; Warner and Havens, 1968; Deutscher, 1974; Gross and Grambsch, 1974). There are also important conceptual distinctions that must be kept in mind, such as goal displacement, goal succession, official and operating goals, and output and support goals.

The goal-attainment approach has certain limitations partially hinted at in the above distinctions and should be kept in mind as the approach is used. A major limitation is that publicly stated goals by both students and colleges have an illusory quality in that they may never have been intended to be realized. A second limitation is the narrow perspective on the institution's overall operation. To the extent that the goal-attainment approach assumes that specific goals can be evaluated and modified in isolation from other goals being sought by the individual or college, it constitutes an artificial and fallacious approach. Full discussion of the problematic character of goals is a topic beyond the scope of this chapter, yet we want to point out some of the complexities in the goal-attainment approach.

Viewing goals from a multiple perspectives strategy means that goals can be conceptualized from different points of view and at different levels of college operation. Such a strategy opens up several alternatives for any college as it seeks to identify the most important and useful goals for its educational program. The PERC framework identifies four points of view — individual, program, institutional, and external — and three goal levels — the individual, program, and institutional. (See Figure 5.)

Figure 5
A Multiple Perspective
View of Goals

	Goal Levels		
Point of View	Individual	Program	Institution
Individual			
Program			
Institutional			
External			

This classification scheme allows us to extend the goal-setting process in new directions. Let us illustrate here how these goal perspectives and levels work. At the *individual level,* students may set various goals for themselves. For example, students may seek to improve their communication skills or gain admission to graduate school. Vocationally, students may seek out business skills to obtain a better job. Personally, students may take courses designed to improve their interpersonal competence or self-image. From the *program perspective*, perhaps faculty might set certain requirements for all students in a given major with certain minimal standards of performance (grades, test results, papers) as demonstration of individual learning. From the *institutional perspective*, the college might set certain goals (distribution requirements, overall performance standards) that each student must meet in order to graduate. From the *external perspective* (beyond the college), parents may have particular goals for their sons and daughters (individual level) such as becoming a harpist or being a leader in student government. Parents also have program level goals since they want their children to receive the appropriate knowledge and training to be successful in a particular occupation. Parents also have college-level goals in that they want to know that their tuition and tax dollars are paying efficient and effective college operations. Chapter 3, on methods and instruments, provides a picture of how these goals may be identified, and some ways are suggested to limit the complexity.

Outcomes

When the goal identification and specification process has been completed, the next step is to convert these goals into outcome statements so that measurements of change or impact can be discovered. To illustrate this process we draw from the educational objectives at Empire State College. The College has as one of its cognitive objectives the ability to analyze, defined by the College as the ability to break down a communication or experience into its basic elements and to make explicit the relationships among them. This same definitional statement can be treated as an outcome statement. In specifying the concept, ability at analysis, several dimensions of analysis are identified and specific educational illustrations developed that serve to guide the research process. Three dimensions of analysis are: identifying the basic elements, determining the relationships or patterns among the elements, and analyzing the organizational principles that hold the communication or experience together. Examples of analysis competencies are the ability to recognize unstated assumptions, the skill to distinguish facts from hypotheses, and the ability to detect logical fallacies in a person's argument. With the dimensions of the concept identified and specific illustrations of outcome statements provided, it has been possible to design rating forms or content analysis scoring techniques that measure outcome change in analysis from time of entry to time of graduation. A similar process has been followed for all the College objectives so that outcome change can be determined for the students as they progress through the educational program.

Individual outcomes refer to the goals and competencies that each student would like to achieve as he/she completes his/her degree program. As a personal goal, a student may indicate on an entering questionnaire or in an interview that he/she wants to improve his/her professional status or self-image. From this initial goal statement, the student will be subsequently interviewed and asked how important is this goal and to what extent has the College facilitated achievement of this goal. The initial goal statement is thus converted into an outcome statement by the research process. Changes can be identified. In addition, the faculty member, employer, or significant others are asked to judge the student's achievements in regard to this goal. An overall picture begins to emerge as to whether a student's personal goals are built into the College's program and whether the student and others can demonstrate that significant learning has occurred.

Effectiveness

The final concept under the general topic of a goal-attainment approach is educational effectiveness. Once the goals have been determined and converted into outcome statements, and measures of outcome change have been derived, the question becomes one of judging the significance of the learning that has occurred. This idea of effectiveness, then, refers to the standards or judgments to be made about a given student's learning. Effectiveness refers to the *college-induced* change in a wide variety of student attributes, such as goals, knowledge, abilities and skills, interests, values and behaviors.

What criteria for effectiveness have been developed that provide a way to sort out levels of student learning? Judging the effectiveness of student learning has generally been the domain of college faculties. Usually, faculty evaluate the academic abilities of their students in terms of some grading system or test scores. In the past, the criteria for effectiveness have been rather narrowly defined and placed at the discretion of college faculties or certain national testing organizations. Thus, high levels of performance as determined by faculty grades or national test scores indicate that students had highly significant learning experiences.

The multiple perspectives strategy opens up alternatives to the more traditional ways of judging educational effectiveness. Faculty judgments of student learning in terms of academic standards used in a given discipline or college are still a primary means of determining how effective an educational program is and what level of learning a given student achieves. Academic standards that are to be applied to assess levels of learning and program effectiveness do require a specificity that is frequently missing in previous work. Thus, faculty have an important responsibility to insure that fair and consistent standards are developed and applied to levels of student learning so that each student is aware of the criteria used to evaluate his/her learning.

The PERC framework also provides for students to assess the level of their own learning and provide judgments about the quality and depth of their educational experiences. Generally, students determine the effectiveness of their learning in terms of personal goals and a somewhat broader context of cognitive and affective outcomes than are used by faculty. PERC has developed several kinds of rating forms and interview schedules that provide measures not only of gross outcome change but also levels of effectiveness that reflect the depth of a student's learning experience.

Finally, the PERC framework has a research component for assessing effectiveness of student learning. Various research instruments have been designed to measure gross outcome change scores. Research judgments can then be developed as to what constitutes greater or lesser effectiveness in student learning. Criteria can be specified in advance as to the size of outcome-change scores that will be used to determine various levels of effectiveness. Research judgments about the level of student learning are a distinct and independent source of determining educational effectiveness.

These ways of approaching educational effectiveness can be supplemented with additional evaluators. For example, panels of external examiners, outside consultants, employers, spouses, community leaders, and various other persons may be used to examine student learning and assess college impact. These individuals and groups provide additional perspectives and information from which a more complete understanding of student learning can be obtained.

Educational effectiveness viewed in a multiple perspectives framework is a complex concept involving multiple standards and levels of achievement drawn from several different evaluators. No single set of standards can suffice. Research reports, then, must reveal the different perspectives and different standards being used so that the reader can obtain the broadest possible context for judging the kind and level of learning a given student has attained as a result of his/her college experiences.

DESIGN OPTIONS

A third distinctive feature of PERC relates to design. Simply stated, this *Handbook* recommends a *longitudinal design* that follows students from the time of entry at college through their degree program to graduation and beyond. The purpose of the longitudinal design is to uncover data on student change induced *by the institution* as close as possible to where that student learning occurred. The college should then be able to determine where, when, and why students have changed as they move through their degree programs and leave the college. To carry out a longitudinal design at a traditional college could, however, require five to six years of work. The usual program of study is four years, and with a postgraduate survey the total time required would be substantial. Therefore, the PERC framework provides an optional design strategy that combines features of cross sectional research with the longitudinal framework.

In order to meet annual budget cycles and provide short range data on student learning, a college may want to sample students at entry and subsequent years in college, following them through to graduation and after. By designing a study that provides data on different students at each year in college, a one year cross sectional picture of learning emerges. As each succeeding year passes, these cross sectional pictures become converted into a longitudinal evaluation of student learning. This design strategy provides certain data within a one-year turnaround time for academic and budgetary decisions and builds year by year into a more comprehensive longitudinal study with value-added data on student learning.

A CONCLUDING NOTE

Another distinctive feature of PERC is the primary focus of evaluation on the relationship of outcomes and costs instead of just one or the other. This focus avoids the temptation of stopping after accumulating only cost information, since the first step is determining what happens to students (intellectually and personally) while attending the College. Only then are determinations made of money spent from all sources in the various programs to achieve results. The outcomes-before-cost strategy provides an opportunity to examine the various costs involved in achieving different learning outcomes. This type of integrated information can be put to direct use in improving the learning process, assisting program evaluation, facilitating program and budgeting decisions, and developing long-range planning. More detailed discussion of the outcomes-costs relationship is found in Chapter 4 and 5.

The following chapter looks at the toolbox of PERC instruments for identifying outcomes-cost relationships. As noted often, all instruments are adaptable to any postsecondary setting.

CHAPTER 3
TOOLS FOR ASSESSING PROGRAM EFFECTIVENESS AND RELATED COSTS

This chapter presents the PERC instruments as they fit into the longitudinal design. It begins with a discussion of goal identification. Each succeeding subsection describes a single research tool, when it is administered, to whom, why, and what it will require in terms of staff, time, and direct costs. Adaptation suggestions are also made. Copies of the instruments are either in the back cover pocket or included after each descriptive section. While this type of presentation encourages selection of single instruments for a particular need, PERC strongly recommends at least two methods of evaluation at each stage. At the end of the chapter, suggestions are made on how to group the various instruments.

GOALS

The PERC goal attainment framework requires a clear identification and articulation of goals, as noted in Chapter 2. Identification and articulation of goals is common to most, if not all, assessments of effectiveness. As observed by Lenning (1975), however, no one scheme achieves a comprehensive statement of alternative goal levels or points of view (i.e., perspectives). Thus, PERC's recognition of multiple levels of goals and multiple perspectives on them makes it unique, though complex. Figure 6 highlights this complexity and shows the PERC suggestions for goal identification.

The table suggests, as noted in the previous chapter, that individuals, programs (e.g., a department), and institutions can have goals. Other individuals or groups can also have views on appropriate goals. For example, while individuals often have personal goals (i.e., an individual's perspective or point of view on individual level goals), so also do institutions have goals for their students and faculty. At Empire State, the institution has goals for students in terms of the Bloom taxonomy of educational objectives (see Glossary). Empire State College wants all students to improve in communication skills; knowledge; comprehension; ability to analyze, synthesize, evaluate, and apply learnings. While PERC recognizes the complexity, this *Handbook* does not suggest identification of all perspectives on all levels. Instead, as the

Figure 6
Goal Identification: PERC Methods by Level and Perspective

Point of View	Goal Level		
	Individual	Program	Institutional
Individual	SBI & Interviews	No recommendation	No recommendation
Program	No recommendation	Delphi techniques	No recommendation
Institutional	Catalogue Goals (e.g., Bloom Taxonomy)	No recommendation	Goals in IGI*; Catalogue, Master Plan
External	No recommendation	No recommendation	State Master Plan, State Ed. Dept. Policies

table and the following pages indicate, PERC recommends identification of goals as viewed only from certain perspectives.

Identifying Goals at the Individual Level

The students' personal goals might include educational goals (e.g., graduate school admission or learning more about art), vocational goals (e.g., getting a better job), or goals of another sort (e.g., learning how to be an effective contributor in local politics). PERC identifies student goals as expressed by the students themselves on a Student Biographical Inventory (SBI) and later reaffirms them in a Student Experience Questionnaire (SEQ) and Program Completion Questionnaire (PCQ). Examples of questions and possible responses include:

> What is the highest degree you intend to obtain?
>
> How important is it for you to achieve the following? increase my appreciation of art, music, literature, other cultural expressions; discover my vocational interests; obtain specific skills that will be useful on a job; learn how to participate effectively as a citizen in my community; increase my self-image, etc.

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*Institutional Goals Inventory, an E.T.S. instrument described on p. 15.

Interviews with the case study subjects will also ask about goals and probe further into responses than the forced-response SBI. Thus, students have an opportunity to state goals in their own words.

Faculty goals are identified in two ways. The anonymous Faculty Questionnaire (FQ) uncovers goals of individuals and the aggregate group goals. In addition, the interviews allow an opportunity to discuss personal goals. Thus, PERC's inquiry into faculty goals is not only a simple quantitative activity but is also a qualitative process.

PERC, to date, has not specifically developed ways to identify program goals for individual students and faculty members. It is possible to analyze some of the instruments by program groupings (e.g., take SBI items on goals for all philosophy majors and label the areas important to over half of the respondents as program goals), but such methods are a bit forced and can be grossly misrepresentative. For example, if 51 percent of the philosophy students have hopes of someday obtaining a law degree, is preparation for a legal career a program goal for individual students?

Institutional goals for students are usually found in a college catalogue. At Empire State, the Bloom taxonomy of cognitive skills exists as College objectives for students. These are potentially measurable and thus useful. Other institutions may have similarly measurable goals for their students.

Identifying Goals at the Program Level

There are multiple ways of viewing programs. A program in PERC is an identifiable entity that has (or could have) goals and objectives. It may not have administrators or a budget, but there must be a way of assigning costs to it. For example, a philosophy department is a program. At Empire State, the nine broad areas of study within which students generally study are programs. So also is the Studio Arts Semester in New York City. But a regional learning center, which has students and faculty in all study areas, is not a program but rather a "mini-institution." Program level goals are seldom specified and few techniques are effective in uncovering them. The program level, thus, is a problem for PERC at ESC. One solution is a modified Delphi technique.

The Delphi technique was first used extensively at the RAND Corporation. It recognizes the value of encouraging widespread involvement while keeping respondents independent from each other, thus negating certain delimiting aspects of group process. To develop program goals through Delphi, a researcher might ask the program's members to list what for each are the three or four most important program goals. The responses are collected and listed separately for redistribution. This time, respondents check the three or four on the list that seem most appropriate. The final rounds of the exercise distribute the highest ranking items and take the highest scores as the program goals.

Individual views of program goals can be determined by using the final round of individual responses. This procedure is highly complex and time-consuming. If the Delphi is administered institution-wide and beyond, it is possible to include such perspectives on program goals. But these strategies are again complex, time-consuming, and not obviously productive methods. Thus, PERC recommends the Delphi technique administered to the program only or some other means of obtaining program goals from a program perspective (e.g., catalogue or self-study goal statements).

Identifying Goals at the Institutional Level

Institutional level goals, like program goals, can be defined by summing the smaller units (i.e., individuals, programs) or by having the institution *qua* institution define them. PERC recommends the latter using either a Delphi technique as described in the previous subsection or the Institutional Goals Inventory (IGI).

The IGI is a survey with 20 goal areas (e.g., intellectual orientation, individual personal development, vocational preparation) defined by dispersed items. It can be administered to large numbers of faculty, students, administrators, people in the community, trustees, and others, and thus provides a comprehensive, statistically determined profile on institutional goals. By subgroup analyses, program perspective on "institutional" goals can also be identified. The instrument has high reliability and validity and has been used successfully on such large samples as the 116 postsecondary public institutions in California.

Another way to identify institutional goals as viewed from the institutional point of view is in catalogue, master plan, and self-study statements. Later measurements of goal achievement or nonachievement may require adapting survey instruments (e.g., see questions 45 and 46 on the Empire State SBI, back cover pocket).

One other perspective on institutional goals is from external constituencies. For example, the State University of New York Master Plans periodically suggest directions for the member institutions. In addition, State Education Department mandates guide certain decisions as do State University Board of Trustee polices. Identification of external goals for the institution is accomplished by examining appropriate documents.

Summary - Recommended Methods of Goal Identification

Goal identification is difficult and, given the various levels and perspectives recognized by PERC, complex. To make the task manageable, PERC thus recommends the following:

Individual Level	individual perspective	ask individuals directly in surveys and interviews
	institutional perspective	use Delphi or previously developed list of goals (e.g., Bloom taxonomy)
Program Level	program perspective	use Delphi or previously developed list of goals by the program
Institutional Level	institutional perspective	use Delphi, IGI, or previously developed list by the institution.

Note that we do not recommend aggregating individual responses to such methods as the Delphi at the program or institutional level. We similarly do not recommend aggregating program responses at the institutional level. *The summation of several lists of program goals does not make up institutional goals* in our view, although one could argue that the whole is equal to the sum of its parts.

As we gain more experience with PERC, additional methods of identifying goals will be developed. New models are especially important at the program level, where little currently exists.

STRATEGIES AT ENTRANCE

Studies of students at entrance to the institution serve to determine the base from which students are learning. Future studies can then be compared to the initial findings to determine whether there has been change. The tools used by PERC for this initial research are the Student Biographical Inventory, tests of intellectual competence, student interviews, and student and faculty rating forms.

Student Biographical Inventory (SBI)

What: The SBI is a comprehensive survey instrument administered to students at entrance to the institution. It has several distinctive parts, each providing a different look at student characteristics.

General Information: name, sex, age, marital status, years in state and country, parents' and spouse's educational and

vocational background, current employment situation, race.
Previous Education: secondary school, colleges, proprietary institutions, in-service training.
External Supports: concern over financing education, sources, income, non-monetary supports.
Your Selection of ESC: other college applications, how learned of the College, expected area of study, reasons for selecting the College.
How Do You View Yourself: leisure-time activities, self-rating on traits and abilities.
Personal Goals: specific goals at ESC, degree aspirations, self-rating on achievement of ESC intellectual goals, self-rating on achievement of ESC affective (personal development) goals.

Who: The SBI is designed for administration to large numbers either in a group setting or through the mail. At Empire State, it is sent to all new enrollees every month. Other institutions may wish to give it to all freshmen, 500 freshmen, or some similarly large sample.

Why: The basic purpose of the SBI is to provide baseline data for a large group of students on a variety of questions. This is also the initial measurement in the value-added inquiry. The SBI helps answer: who are the students; from what kinds of educational and socioeconomic background do they come; what sorts of potential family, job, and financial constraints will they face; why did a student select the institution; what are some of the resources that the student brings through previous experiences; how does the student view him/herself; what does the student hope to accomplish through study; does the student feel well along towards "achievement" of ESC cognitive and personal goals? Cross tabulations on these areas are easily done. Further, more sophisticated analysis can provide additional information. For example, factor analysis at Empire reveals distinguishable "types" of entering students. The types are defined by basic demographic items, apparent resources brought by students, perceived independence, or any of several other dimensions.

How: Administration is fairly easy and takes but one well-organized person. There is currently no operating optical scanner coding. Thus, this step in the analysis may take two to eight temporary employees a few weeks. Training them is fairly straightforward. Coding instructions are available from Empire State. For computer analysis, we recommend (on all of the survey instruments mentioned here) Statistical Programs for the Social Sciences (SPSS), National Opinion Research Center, University of Chicago or any comparable statistical package or computer technique.

Adaptation: All PERC instruments can be adapted to other settings according to local requirements, restrictions, or resources. The only *caveat* is that the adapted instrument should cover all the broad areas of the original. For example, if the PERC original asks questions about learning contracts, an institution that offers traditional classes should change the items to fit that context (e.g., what is the normal way in which your professor runs his/her classes?). Modification can be as simple as merely changing the name or quite complex. For example, the State University College at Plattsburgh recently made major changes, as described later in this section, whereas the University of Wisconsin-Green Bay made almost no alterations.

See back cover pocket for actual
copy of this instrument

Adapting the SBI: One Institution's Experience

Here is an example of how one cooperating PERC institution revised the SBI. It is in three parts. It stands as a good model for any college thinking of working with PERC.

SUNY-Plattsburgh Adaptation - December 1975*

Prior to the administration of the SBI, the professional researcher conducted a pretest with a small group of freshmen volunteers. The pretest was done in the evening, in a small meeting room which was conducive to an informal atmosphere. One factor which may have biased the pretest was the fact that all of the volunteers were female.

The following is a description of all the salient comments and suggestions which resulted from the pretest, as well as changes made independently by the professional researcher. Some of the suggestions were reflected in the final version of the SBI. On other items the problems identified were either minor, there was little consensus on the nature of the problem, or the problem appeared to be too subtle to warrant changing the SBI without introducing a possible bias.

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*Office of Analytical Studies and Long Range Planning, State University College at Plattsburgh. (January 8, 1976). Reprinted by permission.

Question #12a and b - Formal Education of Parents*

We dropped the reference to spouse's education, since a small percentage of our population is married, and of those married, spouse's education would have less of an influence on the student's aspirations than the educational background of the student's parents. We also dropped the question on trade school, but this will be included in the future.

Question #29 - Sources of Financing

At the suggestion of one panel member we added scholarships to the list of sources of financing.

Question #32 - How do your family, friends and employer (if any) feel about your enrolling at PSUC?

A panel member noted that there should be two questions; one regarding one's decision to attend college in general and a second question relating to the choice of PSUC specifically.

Since we were primarily interested in the choice of PSUC, we left the question as is. If we get a lot of non-responses to this item, we may consider dividing the question in the future. We also anticipate getting a lot of not applicable responses for the employer column.

Regarding Section IV of the ESC instrument, we deleted these questions on factors influencing one's decision to attend PSUC because we already have that information from another source. We substituted questions regarding the choice of a major. One question is designed to check the degree of certainity of the choice of major, and the other taps possible influence pertaining to that choice. As students are tracked by the SEQ and PCQ, changes in major will be analyzed using the information on these items as baseline (e.g., were the "samplers" more apt to change majors than the freshmen who were "quite sure that this will remain my major"? What influences were most salient for the students who switched majors frequently, switched majors once, or maintained the same major?).

Question #40 - In the past year how many times have you in your leisure:

Some panel members had difficulty in noting that these were leisure time, extracurricular activities. Consequently we expanded the introduction, and underlined leisure twice. We also qualified the reference to "attended a lecture" by specifying "non-credit lecture."

Prior to the pretest we dropped five ESC items (#40 r, t, u, v, and y) because they were either very similar to other items or were less relevant to a college freshman population. None of these items had a high correlation with the primary factors of the SBI as indicated by the ESC factor analysis. We also added a question on travel to other parts of the country or abroad, since travel can be assumed to be an enriching experience and may separate the "parochials" from the "cosmopolitans."

We modified three items (40 i, l, and ee) which were either too specific or the examples were outdated. "The merits of a political/economic system (e.g., communism, socialism, capitalism)" is no longer as salient an issue as it was in the 1950's and early 60's. The Western countries have systems which can best be described as mixed economies and the communist countries exhibit many free market features. This question probably raises more issues than it solves.

For the item, "discussed a scientific theory or event," we substituted the discovery of DNA for open heart surgery. Strictly speaking open heart surgery is not a scientific event but a medical one while DNA is an example of basic research. Similarly the wide practice of open heart surgery suggests that it is no longer a new event.

Regarding "watched TV news specials or documentaries," we dropped any specific examples, since the public memory on current events is quite short and specific examples become outdated very rapidly.

Question #41 - Rate yourself on each of the following traits...

Since the SBI was administered late in the first semester, we anticipate that there will be some ambiguity for the respondents as to what reference group they will identify. This is especially true of the item on popularity, which will vary from the pre-college context to the college context. Since many students may not be very fully socialized to the college scene, they may refer back to their high school popularity. Similarly, those respondents who interpret the question as referring to the college context may rate themselves differently. In addition "popularity" is probably much more significant for our age group than for the ESC population.

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*Question numbers refer to the number sequence on the Empire State SBI (see back cover pocket).

The item on sensitivity to criticism was interpreted in several ways. Some viewed sensitivity to criticism in normative terms and assumed sensitivity was bad. Others read sensitivity as openness or receptivity to criticism. The person with the normative view of sensitivity also inverted her response (i.e., if she was very sensitive, that was bad or deviant so she scored below average. If she wasn't sensitive, that was good and she would score above average). To prevent this confusion explicit scoring instructions were inserted for this item.

Another panel member saw a distinction between personal criticism (from a peer, for example) and non-personal or academic criticism. Our question was split to reflect that distinction. Tolerance exhibited a similar range of interpretations so we split the question into "tolerance of other people" and "tolerance of other ideas, values and styles of life."

Question #42 - General Objectives

There was some discussion by the panel on whether they responded to this question in terms of objectives *while at this college*. This gets to the heart of the value-added problem, in that some respondents may answer the question in terms of their personal objectives, but the extent to which they expect the college to contribute to these objectives may be a separate issue. This question may need to be expanded to solicit objectives during the next four years, with a follow up on their expectations of the college's contribution to the fulfillment of these objectives.

We added an item on student life and campus affairs and also preparation for marriage and family life. The latter was suggested by the panel after a long discussion of the relative importance of marriage, etc.

General Observations

We were concerned about the motivation of freshmen to complete the questionnaire. As a partial incentive the SBI cover letter indicated that the results would be available in the library. In addition, we gave the respondent the option to review his/her questionnaire in the future.

One panelist expressed the fear that a lot of students would not take the instrument seriously. To date we haven't seen any evidence of joking around on those questionnaires which were returned. However, we will be exploring alternative ways of administering the SBI next year. A preferred mode would be in small groups, informally, as in the pretest. However, time and manpower considerations make this unrealistic. A second alternative may be to administer them in classes of introductory courses. This may disrupt class schedules and require a high degree of faculty cooperation. Registration is also an option that has been tried here in the past, but the response rate has not been consistent. The alternative we are currently exploring would be to administer the SBI in conjunction with the freshman orientation process.

* * *

Tests of Intellectual Competence

What: There is a need for a relatively objective evaluation of students' intellectual ability at entrance. Standardized tests measuring both general and specific areas can provide this information. Although we have to date found no test that seems clearly appropriate for Empire's primarily adult student body, the Educational Testing Service (ETS) Undergraduate Program (UP) is a useful package. At entrance, the UP calls for three area tests: Humanities, Social Science-History, and Natural Sciences. Each is 45 minutes long. All three are normed on national samples. Another possibility at this time is to use individual student's SAT or ACT scores. Still another is to use CLEP General Examination scores.

Who: Test administration can be time-consuming and expensive. Thus, we recommend subsampling (see section on sampling in Chapter 1). If the SBI sample is 500, a 20 percent sample of 100 should be sufficient.

Why: Standardized testing, despite its tendency to measure only a few elements of the complex phenomenon called learning, is comparable and relatively objective. A student answers questions either right or wrong, and the test results can be related to performance of students in other areas. Thus, tests provide an important look at the cognitive ability of entering students. Some of the questions they can help answer are: what is the apparent ability of the particular group of students? what are some of their apparent weak areas? how does the group compare with regional and national norms? and the like. Cross tabulations by age or sex or some other dimension are again possible. These results can also help futher define student "types" as mentioned in the SBI section.

How: Standardized testing can be expensive. Various national testing agencies can provide coding, scoring, and user-selected analyses at a fixed price. If an institution decides to do local scoring and analysis, the direct test costs can be reduced. Overall, requirements include money, a testing site, a test administrator, scoring ability, and someone to interpret results which may require consultation. Turn-around time varies, but four to six months per administration is not an unreasonable expectation.

Note: No copies of standardized tests are included here. For information on the variety available or on specific instruments, we suggest contacting the American College Testing Program (ACT), Iowa City, Iowa; The Psychological Corporation, 304 E. 45th St., New York City; the Educational Testing Service (ETS), Princeton, New Jersey; and/or any of several other reputable firms.

Student Interviews at Entrance

What: Interviews provide a depth of understanding that is not possible with any paper-and-pencil technique. At entrance, it is useful to probe beyond the survey forms for answers to: why students want college? why this institution? what are student's specific goals? what is the student's particular learning style? what resources does a student draw on? and the like.

The PERC student interview schedule at entrance is not highly structured. It calls for questions in several of the same areas as are covered in the Student Biographical Inventory: background, previous education, supports, why go to college, why here, and goals. What differs from the SBI is the possibility of follow-up questions. For example, "You say that your employer is highly supportive of your returning to study, can you give any specific evidence? Why do you think this support exists?" Another example, "You say you came to Empire State simply to learn, why do you feel the need to enroll in a degree program? You can learn anywhere."

Who: Interviews are conducted with a 10 to 20 percent subsample of the SBI group. At Empire State interviewees are selected from the SBI responses so that the subsample contains equal numbers from each student type.

Why: The basic purpose of the entrance interviews is to provide qualitative data that begins the process of building *chains of evidence* in complement to the quantitative SBI. Although virtually all areas covered in the interviews are also in the Student Biographical Inventory (SBI), interviews have several advantages over questionnaires. First, response rate is almost always high. At Empire, nearly 100 percent of the students agree to participate when asked. More important among advantages, however, is the possibility of probing areas where a person seems to have unusual insight, complex answers, or apparent misinterpretations. On a questionnaire, there is no way to challenge the respondents when they seem to contradict themselves. Another area where interviews are often superior is emotional topics. A good rapport may establish enough trust so that the respondent feels comfortable in offering unpopular views. Although anonymous questionnaires provide more private opinion, some respondents are uncomfortable or find it difficult to explain fully in writing strongly held but controversial views. Thus, although interviews cannot always be substituted for more easily quantified methods, they do make useful supplements.

How: Interviews take time, although they need not exhaust a staff. One person assisted by a secretary to transcribe tapes can do four to five interviews a day. This amount of interviewing is, however, strenuous. Unlike questionnaires, which require development, pretesting, administration, follow-up, coding, and analysis, a modest sized interview study can be mounted and carried out quickly and often cheaply.

Adaptation: PERC requires that the entrance student interviews cover the same general areas as the SBI: background, reasons for attendance, perceived abilities, resources available, and goals. Any adaptation that meets these criteria is appropriate.

Student Interview Guide (Entrance)

1) Initial Contacts with the College
    a) How did you learn about the institution? When?
    b) What was your initial contact with the College?
    c) Did you consider other alternatives?
    d) What is attractive to you about this College?
2) Student Orientation
    a) Where was your orientation?
    b) Describe what happened.
    c) Was orientation worthwhile? Why?
    d) Any suggestions?
3) Initial Meetings with Faculty
    a) What did you do in your first meeting with a mentor?
    b) Was it productive?
4) Goals and Objectives
    a) What do you hope to accomplish at this institution?
    b) What long-term plans do you hope college will help you achieve? Occupational? Academic? Other?
    c) What is your academic interest area? Why?
5) Other
    Do you anticipate any problems? (money, family, etc.)

Student and Faculty Rating Forms at Entrance

What: The PERC staff designed rating forms for students and faculty to provide two judges of student growth in four areas of cognitive development and three of personal development. The rating forms are quantifiable, but we consider them as case study, not survey techniques. The four cognitive areas examined are: communication skills, ability at analysis, skill at synthesis, and ability at application. The three personal development areas are: skill in clarifying purposes, increasing awareness, and improving self-confidence. Each dimension is rated by the student and that student's mentor or advisor on a nine-point scale.

Who: The rating forms are administered to a subsample of Student Biographical Inventory respondents. Because the forms are relatively easy to administer, code, and analyze, they may be administered to larger samples than the other case study techniques.

Why: The purpose of the rating forms is to provide a different response format from the survey and interviews while providing another step in building *chains of evidence*. Education of diverse students takes many forms. For example, a 50-year-old owner of a small business may be skilled at applying various elements of knowledge at the time he or she enrolls, but not be equally skilled in analyzing a particular author's point of view. For other students, the reverse may be true. Empire State College states that it is important for students to improve in all of the areas covered in the rating forms. This technique helps provide evidence of where a student is on these dimensions at entrance. Analysis is straightforward but with various groupings (by age, by student types, by sex, etc.). Some questions that the rating forms deal with include: are there any patterns in responses by student type as developed in the Student Biographical Inventory, by age group, by previous educational experience, by employment category (e.g., supervisory, technical), by sex, and so on? If such patterns are present, it may help faculty to respond more easily and directly to the needs of students.

How: The rating forms require perhaps only one person to administer, code, and analyze. Empire State experience indicates that they are easily completed by respondents, who need only 10 to 15 minutes at most. If mails are not used, there is little cost.

Adaptation: PERC requires that the rating forms ask a student to rate him- or herself on a variety of dimensions that correspond to a taxonomy or to institutional goals for students. Faculty also rate the same students on the same dimensions. Any adaptation that meets these criteria is appropriate.

See back cover pocket for actual copies of these instruments

STRATEGIES DURING STUDIES

The importance of following up entrance studies *during* the student's career at the institution is to obtain some insight as to what specific impacts the educational program is having on students. By identifying change as close as possible to the time that the change occurs, one is also better able to distinguish what specific aspect of the program (faculty, resources, learning philosophy, etc.) is influencing the change. The instruments used by PERC in this phase of the research framework are the Student Experience Questionnaire, content analysis of contract digest and evaluations, interviews with faculty and students, and Faculty Questionnaires.

Student Experience Questionnaire (SEQ)

What: The SEQ is a quantifiable measure of student perceptions during studies. One especially important purpose of this survey instrument is to confirm changes or nonchanges in the goals of students since the Student Biographical Inventory administration at entrance. Other areas covered are:

Degree Program and Portfolio Process (see Glossary): Who helped and how much time was spent, feelings about the process, areas in which the process helped that student learn (e.g., to improve ability to evaluate, increased self-understanding).

Student-Mentor (Faculty) Relationship: What is the nature of the relationship, how often do the student and mentor meet, what does the mentor seem to expect of the student, is it a satisfactory relationship?

Learning Resources: What types of learning resources is the student using in early contracts, are they helpful?

The SEQ is Empire State-specific, so most institutions will wish to modify it. Since it basically is trying to learn how the student's education is progressing at mid-stream, the modification process should not be too time-consuming. For most items about mentors, the term advisor or faculty can be substituted. For "learning contract," "class" can be substituted. Overall, the SEQ is a quantifiable way to see if a student has changed since entry.

Who: The SEQ is administered at Empire State to everyone in the original 500 student sample selected from SBI respondents. The Student Experience Questionnaire comes at the time of degree program approval. Other institutions may wish to administer it to a similarly large group after a semester of a year or perhaps at the end of the sophomore year.

Why: The basic purposes of the SEQ at Empire State are to provide data about the degree program decision and the award of advanced standing. At most institutions, these activities are equivalent to declaring a major. Much research suggests that major changes in 18 to 22 year-old students occur early in their postsecondary careers. This may or may not be true for older adults. The SEQ is designed to measure these changes as close to their occurrence as possible. Then, if students gradually return to former attitudes and goals, the assumption of "no change" is not made. Thus, the SEQ will help answer if early changes are occurring and why.

Another reason for the SEQ is to get early student views of the College and of faculty. As students acclimate, it seems likely that initial confusion and anxieties may be replaced by confidence. If such anxieties are present, it is useful to identify them and their sources. Analysis by the student "types" identified in the SBI continues.

How: Generally the same as for the Student Biographical Inventory (see page 15). Adaptation can substitute "course" and "advisor" terminology for the Empire State "contract" and "mentor" sections.

Adaptation: The SEQ will probably require more tailoring than any other PERC instrument because it is specific to Empire State College. Essentially, however, the PERC framework simply requires a midstream survey look at several dimensions: whether goals have changed, why a given concentration was chosen and what was the process, how are students relating to faculty, how advanced standing was granted (if applicable), what learning resources are being used, and perceived outcomes to date. Any adaptation that meets these criteria is appropriate.

See back cover pocket for actual
copy of this instrument

Content Analysis

What: Content analysis is a systematic method of scoring communications in a prearranged scheme. It allows, by using outside evaluators, a fairly objective measure of student performance on papers, logs, essays, and so on. At Empire State, learning contract digest and evaluations (D&E's, see Glossary) can also be rated. The PERC content analysis strategy for D&E's looks at several categories of statements: broad based learning (mention of two or more disciplines), focused learning, cognitive outcomes (e.g., synthesis), affective outcomes (personal growth). Other dimensions include involvement in experiential learning, application of a historical perspective, tackling of a particular practical problem, professional/vocational aspects, and continuity to previous or future contracts. Evidence in the form of key words in any of these areas earns a score. Emphasis on any of them earns a larger score for that area. Since D&E's tell how well a student performed on the various activities of a learning contract, content analysis gives a comparative sense of what was accomplished and how well. The D&E's at Empire State are part of the official transcript and were thus suggested as a key document for analysis. Other institutions may have an equivalent type of document: senior project, required writing samples, term papers, course essay exams, and so on. The individual procedures and an illustration follow.

Who: Content analysis is performed throughout the student career of the case study subsample. Thus, at Empire State 100 students (20 percent) of the SBI group of 500, subsampling by student type, degree program area, and so forth are used for the content analysis. A similar procedure is recommended for other institutions.

Why: Objective measures of student achievement and growth are hard to find. Standardized tests do an adequate job of measuring mastery of content for a prescribed body of facts. But sometimes they do not apply well, especially in individualized settings where students often explore defensible but uncommon learnings. Content analysis, with its broad scoring rules, is well suited to such people since it can be adapted to a variety of evidence of student progress: examination of test bluebooks, learning contract digest and evaluations, essays, term papers, student journals, and even tape recordings of student-faculty conversations. When scored by independent evaluators, content analysis provides a truly objective measure. The PERC scheme had 81 percent reliability when tested. As with all measures, content analysis of scores can take several forms. Scores by student type, center, and degree program area should prove useful. Also useful will be subscores (e.g., improvement on any particular dimension). Combined with student and mentor perceptions of improvement on any given dimension, the content analysis will be a powerful link in the *chains of evidence*.

How: Although it is not an easy measurement tool to use, the PERC content analysis scoring system is fairly efficient so that two trained coders can score as many as ten documents in an hour. Once coded, analysis can be done by computer.

Adaptation: PERC requires that content analysis be scored according to a taxonomy (as at Empire State) or program or institutional goals for students as stated in a catalogue or other official document. Any program or institution that does not have such a framework or that cannot agree on an acceptable taxonomy will not be able to conduct content analysis. But any adaptation that sets up scoring rules that meet the above criteria is appropriate.

Content Analysis Of Contract Digest and Evaluations (D&E's)

Instructions for Scoring Content Analysis—Word Counts. The word count is the smallest unit that can be identified and tabulated. The key words found in the documents portray the general patterns and relative emphases of College objectives as reported in the digest and evaluations. A frequency count of these key terms (and their synonyms) yields a rough estimate of the impact of a particular objective conceptualized as an outcome in the D&E for each student.

Scoring Rules—General

1. One point will be awarded for each key word explicitly stated in the D&E. Each word will be examined and judged with the immediate sentence (and paragraph if necessary) in order to provide the context for additional clarity where needed. Because mentors do not always follow the D&E sections (i.e., evaluation comments may occur in all sections of a D&E, not simply in the evaluation section), the entire D&E will be read and coded for key terms. Where a key term is used in the specific purpose or methods of evaluation section, it must be repeated in the evaluation section for a score point to insure that the outcome was actually achieved.
2. *Repetition.* In those D&E's where a particular term (e.g., analysis) is stressed several times, a score of 2 points will be given to denote the strength of that outcome.
3. *Other Evaluations Attached to D&E.* Student self-evaluations, tutor evaluations, or other evaluations attached to the D&E but not included in it will not be scored. These evaluations will be read, however, to facilitate the interpretation of specific D&E statements where vagueness or doubts exist. Such statements from these evaluations will not, however, be coded directly. Such evaluations should be noted in the comment section of the form.
4. *Portfolio.* On some D&E's the preparation of a portfolio constitutes the major or only contract activity. One point will automatically be awarded for clarifying purposes. No points will be scored for broad based or focused learning since the contract does not require specific subject matter learning in order to put together a portfolio. Where other skills (e.g., analysis, synthesis, etc.) are specifically identified as part of the portfolio work, they will be scored. One point will also be awarded for the interdisciplinary category under mode of learning where the D&E states work experience and transcript credits were evaluated. In those cases where an extensive amount of transcript credit only is awarded, score one point for interdisciplinary on the assumption that clearly more than one discipline was studied.
5. *Exclusivity of Categories.* Although an effort has been made to provide key terms that are not overlapping among the eight outcome categories, there are some terms that may seem codable into several categories. For each such case, the context of the term must be examined and a written record kept of the scoring decision made.
6. *Independent Scorers.* For each D&E analyzed, two scorers will judge the D&E and a reliability index will be determined.

Scoring Rules—Outcomes

7. *Broad Based Learning.* A broad based learning rating of one point indicates learning involving at least two disciplines. Learnings are defined in terms of disciplines in a traditional campus catalogue not in terms of the nine areas of study used at ESC.
   Disciplines in the arts include performing arts (acting, dance, theatre, music) and studio arts (painting, sculpture, drawing) in addition to creative writing, film making, TV producing, and silversmithing. Each of the areas is scored as a separate discipline. For business fields such as finance, marketing, management, and so on, each field is considered part of business as a discipline and not identified as separate fields. Economics, however, is defined as a separate field. In those business D&E's where there is evidence that the professor, tests, and courses involved are from a different department, then another discipline is involved even though the content seems to be all business. For example, psychology of management may be taught in a psychology department or in a business department and would be scored according to the department involved.
8. *Focused Learning*
   a) Each D&E will automatically be rated one point for focused learning unless there is a noticeable absence to the learning focus of the contract.
   b) One point is awarded for a discipline identified and an introductory level of specific knowledge obtained. Two points are scored for specific statements of depth and mastery in a given discipline. Where such statements as "the student went beyond the requirements of the contract" or gained "mastery of this subject at the graduate level," the D&E should be scored two points for depth.

c) Generally all ESC modules, college courses and SUNY Independent Study courses are to be considered focused learning. But a few ESC modules are interdisciplinary by design so the actual module used will be examined to determine whether broad based or focused learning is involved.

9. *Synthesis.* The keeping of a log or journal or providing a self-evaluation essay or paper is not *per se* evidence of obtaining synthesis skills. The D&E must contain mentor or tutor comments about the student's abilities to reflect, integrate, summarize, and so on, that clearly demonstrate synthesis skills. Also, the inductive use of data and/or putting concepts together into a larger framework is a synthesis activity.

10. *Affective Outcomes.* Frequently affective synonyms like "increasing awareness" or "gaining insight" turn out in context to be cognitive, not affective learnings. Code only those terms that in context are clearly seen as affective; and in those cases where it could be cognitive or affective, we conservatively coded as cognitive. For example, a phrase like "she broadened her vision by interviewing the various agencies" was coded as cognitive, not affective.

Scoring Rules—Dimensions of the D&E

11. *Practical Orientation.* Score a check for practical if the student is engaged in a work or field experience, applying concepts or theories to concrete situations. For art students, visiting and studying original works of art at a museum or art gallery is a practical experience, the equivalent of business students using their job settings to apply their ideas.

12. *Historical Time Frame.* Score a check for history if the D&E denotes direct reference to historical aspects in either the objectives and/or evaluations. Historical is distinguished from contemporary by the somewhat arbitrary definition, "pre-twentieth century is history."

13. *Mode of Learning.*

    a) *Disciplinary.* In pursuing studies in a particular discipline, the student will be guided by the existing framework or a discipline. Within the boundaries of the discipline, the student develops a program that will lead to an understanding of its structure, methods and content.

    b) *Interdisciplinary.* Students who wish to investigate two or more disciplines may organize a program of study in the interdisciplinary mode. The student, in developing a degree program, must identify the disciplines to be combined and the supportive knowledge required to provide background for or sharpening of the focus of the program. This is essentially the same definition for broad based learning.

    c) *Problem Oriented.* A student may approach a program by focusing on a particular problem or set of problems. The student attempts to master the knowledge and skills necessary for an analysis of the attack on the problem. The fundamental aspect of this mode is that the student formulated a well-defined problem and that he or she explores and evaluates various possible solutions to the problem. In coding a D&E as problem oriented, a clearly stated problem must be identified in the specific purposes section and repeated in the evaluation section showing how the problem was addressed and what solution(s) offered. D&E's vaguely implying a problem focus but not clearly stating either the problem or solution(s) will not be coded as such.

    d) *Thematic.* In the thematic mode, the student studies a particular theme or set of ideas that interconnects a body of learning within an area or combination of areas of study. This is different from the problem-oriented mode; in the thematic mode the student does not seek a solution but rather attempts to understand the way in which a particular theme repeatedly appears within human experience.

    e) *Professional/Vocational.* This mode addresses preparation for a particular vocation or profession. The main focus of study is on specific job-related knowledge and skills; a program will involve consideration of the conceptual foundations of a field, the professional role of the student, and relationships with society at large. In cases where training is technical or specialized, the specific training may occur on-the-job or at other higher education institutions. Since many ESC students are working, the coding for this category requires that the D&E specifically state that certain job-related knowledge and skills were a part of the contract. Professional activities must be identified for each D&E and cannot be carried over from one D&E to another.

14. *Continuity/Discontinuity in Direction of Contract.*
The direction of the contract should be determined essentially by the degree-program statement. In the Mini Cost Effectiveness Study, however, we were not engaged in an analysis of

this document. Therefore, the coding judgment will be implicitly made on the basis of all the D&E's taken together. The collection of D&E's is the operational definition of the degree-program statement. For those few cases where a single D&E comprises the student's entire program, continuity was assumed and scored as such.

To illustrate how these scoring rules were applied to an actual student's D&E, we have provided an actual D&E marked up and scored on the following pages.

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student Carol Smith S.S.# 050-62-2277 Contract # 2 Status HT

Mentor Ruth Jones L.C./Unit Unit Date of Contract 2/1/74 to 6/1/74

Months of Credit Earned 2

I. Purpose of Contract and Specific Topics:

This last contract of Ms. Smith completes her academic requirements for graduation. It has included studies in the sociological and psychological aspects of health care, research methods in mental health evaluation, and the completion of a research project. These studies were carried out in the following manner:

(1) Ms. Smith attended two five week courses in advanced psychiatric nursing at Teacher's College, Columbia Univeristy. The courses dealt with concepts in mental health and theories of crisis intervention. A major component of this approach is an understanding of the social context and inter-personal network of the patient.

focused learning

focused learning

upper division

focused learning

broad based learning

(2) She audited a graduate level course in evaluation research in mental health offered at the Graduate School of Public Health, Columbia University. The course was designed to acquaint medical and professional personnel with a conceptual understanding of research methodology.

upper division/ Advanced

(3) She completed an independent research project analysing the patient population of the Rockland County Child Development Center. Ms. Smith interviewed 100 families and developed methods for systematically collecting statistical data on the social background, behavioral characteristics, and birth histories of these families. The background data has been utilized during team evaluation conferences at the Center. Ms. Smith has analyzed this data showing relationships between parental and birth histories of these children and subsequent developmental problems and behavioral characteristics. Ms. Smith prepared a written report and also presented this material in collaboration with the CDC psychologist. Ms. Smith's investigations in this area have also generated a research proposal which she has written and submitted to the National Foundation of the March of Dimes.

professional/ vocational

Application

Analysis

problem focused

Application

Analysis

Application

Synthesis

(4) Readings on the psychological and sociological aspects of health care have included such works as the following: Robert Wilson, The Sociology of Health: An Introduction; selections from Irwin Kraft, ed., Critical Human Behavioral Research Issues in Social Intervention Programs, N.Y. Academy of the Sciences; Aguila, Messeck & Farrell, Crisis Intervention Theory and Methodology; Francis & Munjas, Promotion of Psychological Comfort; Elaine Gold, Community Mental Health Nursing, The Practitioner's Point of View; Gertrude Stokes, The Roles of Psychiatric Nurses in Community Health Practice - A Giant Step.

SIGNATURES:

Student Carol Smith Date 6/25/74 Dean

Mentor Date Date

Page No. 1

CONTRACT DIGEST AND EVALUATION

Student Carol Smith S.S.# 050-62-2277 Contract # 2 Status HT

(5) Attendance at a number of workshops and conferences including, Institute for Child Development and a conference on Obstetrical Management and Infant Outcome.

II. Methods of Evaluation:

Ms. Smith's work in these various areas has been evaluated in the following manner:

(1) Certificates validating her completion of two five-week seminars in advanced Psychiatric Nursing at Teachers College, Columbia University.

(2) Ms. Smith's supervisor, Ms. Jean W. Brown, Educational Director of the Child Development Center of the Rockland Community Mental Health Center has evaluated her research project and her field studies of twelve community agencies in Rockland County in terms of Ms. Smith's increased knowledge in these areas as well as the contributions to the agency as a result of these studies.

(3) An evaluation of Ms. Smith's research by Bernard Schwartz, Ph.D., a psychologist on the Child Development staff of the Rockland Community Health Center.

(4) Annotated notes and tutorial sessions with me on her research project and on her readings which I have been able to assess in terms of her increased knowledge in the areas of research methods, the psychological and sociological aspects of health care, and emerging role definitions of the nurse.

III. Mentor Evaluation:

Ms. Smith's work while a student at Empire State College has been significant in a number of ways: in her own intellectual growth, in the clarification of her professional goals, in the contributions to the program of the mental health agency where she works, and in the possible contribution to further research in the area of birth trauma. Through her field studies, readings, course work and research, she has gained an increased knowledge in the areas of psychology, community mental health, and research methods. The report of Ms. Brown indicates the various ways in which Ms. Smith's studies have contributed to the CDC's program. For example, Ms. Brown writes, "Becoming familiar with the education and consultation service at the Mental Health Complex led to a discussion of the needs of unwed mothers and abortion counseling as well as an awareness of the programs offered in the community." With reference to Ms. Smith's research findings, Ms. Brown says, "In addition to basic facts, such as the sources of referral, types of problems seen, number referred to our nursery program, this material was then broken down to show the ages of the children in each of these categories. It was then possible to show relationships of prenatal and birth histories to developmental problems and even certain behavioral characteristics such as auditory perceptual disturbance." She concludes her assessment by writing, "In conclusion, may I say that Ms. Smith has gained a great deal from the various projects which she has undertaken in connection with her work at Empire State College. I hope that she will be able to continue to pursue the interests which have been opened up."

clarifying purposes
application
focused learning
Analysis
synthesis

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student Carol Smith S.S.# 050-62-2277 Contract # 2 Status HT

Dr. Schwartz writes of Ms. Smith's research in these terms, "This project has evolved into what I feel is one of the most valuable activities undertaken by Child Development Staff and certainly is one of the most comprehensive projects I've ever known an undergraduate to do." Dr. Schwartz concludes by saying, "...I unqualifiedly commend her work of her projects. They have been very professional and educational, not only for her but for her staff, myself included. I have no doubt that this project will be the beginning of many important papers to the profession at large in the future. Mrs. Smith's professional growth in the process has also been gratifying and hopefully she will take new directions for herself from her experience."

professional/ vocational

synthesis

Application

Ms. Smith writes of her own experience, "It has been a difficult, challenging and rewarding year. One unexpected consequence is that I have gained a new insight about my professional role and confidence in orally expressing my opinions and feelings to others in individual and group situations." Ms. Smith has completed the requirements of her contract in all respects and has shown evidence of superior work.

self understanding

Page No. 3

CONTENT ANALYSIS PHASE NAME Carol Smith

Key Word Counts - Outcomes Scored By Frequency of Items Below

Broad Based Learning	**Cognitive Examples** **Focused Learning**	**Analysis**	**Synthesis**	**Application**	**Cogniti Score**
(across areas of learning) General Knowledge Familiarity Recall—general Understand Recognize Learn Fundamentals (principles and generalizations across fields) Comprehend High level of abstraction Halftime; 4 months	(specific area of learning) Specific knowledge of field Basic facts, ideas, and concepts of field Specific terminology mastered Low level of abstraction Delimited learning Designate, assign, or stipulate Comprehensive knowledge Absorbing information	Analyze Distinguish Identify Examine Detect Clarify Separate Decompose Disintegrate Appraise experience Exemplify Illustrate Articulate Relate (context) Define Compare Recognize Inquire Probe Sort out, infer Question	Synthesize Derive Formulate Integrate Generalize Theorize Compose Combine Plan or propose Develop Arrange Relate (context) Compare Extract Grasp Organize Compile Incorporate Compare and contrast	Apply concepts in particular situations Utilize knowledge, facts, etc. Practicability Efficacy Fitness—goodness of fit Draw valid influences from knowledge Use knowledge to solve problems Consider implications or consequences of ideas or experiences Implement Interview skill	
Case Score DE 1 " 2	" 2	" 2	" 2	" 2	10
DE 2 Halftime; 2 months " 2	" 2	" 2	" 2	" 2	10
DE 3					
DE 4					

Office of Research & Evaluation 11/74

Comments

ONTENT ANALYSIS PHASE (continued)

ey Word Counts - Outcomes Scored By Frequency of Items Below

	Affective Outcomes			
larifying Purposes	Increasing Awareness	Self-Understanding	Affective Score	Total C&A Score
larify xplore goals eexamine goals crutinize efine, elaborate, modify efine or distinguish	Awareness Openness Sensitivity Willingness Inquisitiveness Readiness Venturesomeness Other-directedness Perceptiveness Apprehension Empathy	Insight Self-understanding Appreciation Comprehension Self-knowledge Discernment Self-enlightenment Self-confidence		
ase core DE 1 0	1 (Self evaluation)	0	1	11
E 2 1	0	1	2	12
E 3				23 points
E 4				

ffice of Research & Evaluation

omments: Used Self evaluation to verify specific Statements

Coding Sheet - General Characteristics of Each Learning Contract

NAME Carol Smith

(Put X in appropriate box)

Dimensions:

	D&E 1	D&E 2	D&E 3	D&E 4	D&E 5	D&E 6
1. Level of Contract Work						
Exploratory (Lower Division)						
Advanced (Upper Division)		X				
Both	X					
2. Orientation of Contract						
Theoretical						
Practical						
Both	X	X				
3. Time Frame of Contract						
Historical						
Contemporary						
Both						
4. Mode of Learning						
Disciplinary						
Interdisciplinary	X	X				
Problem Focused		X				
Thematic						
Professional/Vocational	X	X				
Combinations						
5. Direction of Contract						
Continuous	X	X				
Discontinuous						
6. Basic Communication Skills						
Strength	NA	NA				
Weakness						
7. Mentor or Tutor Evaluation:						
Excellent/outstanding	X	X				
More than satisfactory/successful						
Satisfactory/adequate						
Less than adequate						
No Evaluative Comment Made						

Office of Research & Evaluation (7/1/74 Revised)

Student Interviews during Studies

What: Interviews during studies provide qualitative backup to the survey instruments and other case study techniques. The kinds of interview questions asked during studies at Empire State include: how well are you adapting to the contract learning approach to education; describe for me how you and your mentor generally develop contracts; was the portfolio a learning experience or simply a bureaucratic exercise for credit and why; what kinds of learning resources are you finding most useful in your studies at Empire State; have you changed your objectives since enrolling in the College, and so on. (See Glossary for definitions of terms.)

Who: The same group as was interviewed at entrance is interviewed during studies. In addition, for comparison purposes, a few others are interviewed. For students who stay enrolled with the College for several years, more than one interview may take place during the studies.

Why: A study of colleges and students is complicated. No survey form can take in all of the complexities or identify the nuances of student's perceived learning and perceived changes. Interviews are an indispensible research tool in trying to address such subtle and complex educational outcomes.

How: See previous section on interviews at entrance (page 19).

Adaptation: PERC requires a midstream interview look at several dimensions: whether goals have changed, why a given concentration was chosen and what was the process, how are students relating to faculty, how advanced standing was granted (if applicable), what learning resources are being used, and perceived outcomes to date. Any adaptation that meets these criteria of this mid-stream study is appropriate.

Student Interview Schedule (During Studies)

1) Degree Program
   a) Describe your degree program.
   b) How was it developed? How long did it take?
   c) Have you changed your degree program objectives since entrance?
2) Learning Contracts and Evaluations
   a) Describe how you have developed your learning contracts and why they were chosen. Describe the contracts.
   b) What is your role? Your faculty mentor's role?
   c) Describe a typical work week in completing contract number ____.
   d) What kinds of difficulties are you having in adapting to contract learning (resource identification, ambiguity, etc.)?
   e) How often do you meet with your faculty mentor? What happens in the meetings?
   f) How were the various contracts evaluated? Were the evaluations fair?
3) Assessment of Prior Learning (portfolio)
   a) How was the portfolio assignment introduced to you?
   b) What kind of assistance did you receive from your mentor? from others?
   c) How long did it take you to complete the portfolio?
   d) Describe the importance of this assignment to your overall education.
   e) Was your prior learning fairly assessed?
4) People Contacts
   a) How are you and your faculty mentor getting along? What kinds of things do you talk about?
   b) What friends have you developed in the institution?
5) Other questions as seem appropriate

Faculty Questionnaire (FQ)

What: The Faculty Questionnaire (FQ) is a quantifiable instrument administered to faculty. It helps identify faculty concerns over time. It also helps describe faculty characteristics in terms of demographics, goals, views of the College, concerns, and the like. Some particular areas explored include: previous experience, use of learning resources, normal style, problem areas, perceived personal changes since coming to the program, satisfaction, role and interest in various aspects of College decision-making, career interests, and perceived effects of working in the program. Allocation of faculty time to various role activities was previously a part of this questionnaire. It is now handled separately at Empire State. Because faculty salaries should be allocated in the cost model, time allocation data must be gathered in some way.

Who: The FQ is administered annually to all full- and part-time faculty at Empire State.

Why: A shortcoming of some research on outcomes is its inability to look at program effects on faculty. For example, ESC is interested in how well faculty adapt to the role, the effects of the program on them, professional development needs, and so on. The FQ mitigates this problem. It recognizes the importance over the long term of positive outcomes for faculty. The FQ also meets some basic data needs of the institution.

Analysis may take several angles. At Empire State, the FQ is anonymous but breakdowns by location, age, sex, area of specialty, and some other dimensions are possible. This allows investigation of important patterns. For example, those complaining about lack of voice in decision-making might be predominately inexperienced (Bradley, 1975). This information could be most useful to an academic administrator. Another example might be a tendency of science people to express concern over library holdings. Such information, on further investigation, could lead to some budget allocation changes.

How: The same as for the student surveys.

Adaptation: PERC requires descriptive data on faculty as well as a survey of attitudes about the program, style of working with students, changes since coming to the program, satisfaction, role in decision-making, and career. Either in the FQ or elsewhere, faculty time-allocation data must also be gathered. Any adaptation that meets these criteria is appropriate.

See back cover pocket for copy of this instrument

Faculty Interviews

What: Interviews with faculty help provide substantiation for apparent patterns in the Faculty Questionnaire analysis. They also provide an opportunity to discuss research projects and obtain useful feedback. Among the questions explored are: why persons joined the program, how long they want to stay, personal style, problems, views of the administration, professional development interests, allocation of time to various role activities, and the like. Responses to faculty rating forms or the Faculty Questionnaire (which is anonymous) may be discussed.

Who: A sample of faculty including those who work closely with case-study students.

Why: The basic purpose of the Faculty Questionnaire is to identify both student and faculty change and development. Like all questionnaires, it finds patterns but can sometimes be misinterpreted. Interviews that explore initial interpretations can not only prevent such errors, but also embellish on the findings. Where a questionnaire response can only suggest, for example, that the science faculty is concerned about deficient library resources, the interviews can find out exactly what is the problem. Similarly, where the Faculty Questionnaire might discover discontent among, say, young faculty over their role in decision-making, the interviews can identify the sources of this discontent and develop possible suggestions for changing the decision-making process.

How: The faculty interviews require a professional interviewer, an hour or more per interview, and transcription time. Sometimes scheduling can also take much time. In comparison with other PERC techniques, the interviews are expensive but the results justify the cost.

Adaptation: PERC requires interview data on attitudes about the program, style of working with students, changes since coming to the program, satisfaction, role in decision-making, and career. The interviews should also gather time allocation information. Any adaptation that meets these criteria is appropriate.

Faculty Interview Guide

1) Aspirations
    a) Describe for me what you see as an "ideal" work situation (El Dorado). Does this vision correspond to what you find at ESC? Knowing what you know now, would you come to ESC if you had to do it over again?
    b) How important to you is it to be able to teach? To do research?
2) Activities
    a) Time log (yesterday, 2 days ago, etc.): how do you spend your days, weeks at ESC?
    b) Why is it that we hear so much about the mentor's work load?
    c) What are the most important things that you do (i.e., ESC, in your center)?
    d) What outside interests (e.g., hobbies) do you have?
    e) How often do you use organized programs? Which ones? With what success?
3) Sorrows and Satisfactions
    a) What are your frustrations? Satisfactions?
    b) What is the worst/best thing about being a mentor?
4) "Super-mentor"
    a) Describe for me the "ideal" mentor. "Ideal" student.
    b) Who at your center comes closest to your "ideal"?

5) View of Colleagues
   a) What is the general state of morale among the faculty at your center?
   b) Does this faculty group do a lot together? Do certain of them?
   c) Do you feel that the mentors at your center are a fairly strong group academically?
6) Problem-Solving
   a) When a problem (e.g., students, advanced standing, program, faculty assignment, etc.) comes up at your center, how do you deal with it?
   b) Do the various committees at this center work pretty well? What are they? Membership? How appointed? Etc.
7) View of Learning Center
   a) What's distinctive about your center (e.g., in terms of faculty, students, governance, social, atmosphere, mentor role, community resources and linkages, view of Saratoga Springs, leadership, etc.)?
   b) Where is this center going? How? Will you get there?
   c) Do you think the people at the Coordinating Center in Saratoga Springs understand the problems (e.g. __________, __________, __________) at your center?

STRATEGIES AT COMPLETION OF THE PROGRAM

The third phase of the PERC research framework occurs when students graduate from the College and serves to provide information as to how far students progressed from time of entry to time of graduation. The instruments employed during this phase mirror those used at the time students enter the college.

Program Completion Questionnaire (PCQ)

What: The PCQ mirrors the Student Biographical Inventory, which identifies perceived value-added from the student's viewpoint. The instrument has five sections:

1. Background: hours working, opportunity to pursue learning objectives, change in educational objectives.
2. Faculty-Student Relationship: style of developing learning activities, frequency of meetings, interaction style, length of meetings, types of advisement, amount of challenge.
3. Learning Contracts (see Glossary): ease of adaptation, time spent on different types of mental activities, learning resources used, quality of evaluations, problems encountered, adjustments in personal life necessitated by study.
4. Outcomes: changes in intellectual competence, changes in personal development, self-rating on abilities, leisure-time activities, changes in goals.
5. Future plans: vocational goals, academic goals.

Who: The PCQ at Empire State is administered to the same persons who received the Student Experience Questionnaire less those who have dropped out. Some institutions may wish to administer to a larger group (e.g., all original SBI respondents).

Why: The PCQ is the basic PERC instrument for finding out if goals were achieved and why. It is, therefore, a primary quantifiable instrument for determining value-added. Thus, to a great extent, it tells from the student's viewpoint whether or not the institution was successful. Analysis again can focus on patterns of institutional "success" by student type, age, sex, area of study, or any of several other dimensions. This evaluation should help the institution strengthen weak areas and help faculty recognize incoming students who may require particular attention if their needs are to be met.

How: See Student Biographical Inventory and Student Experience Questionnaire sections (pages 15 & 20).

Adaptation: PERC requires a survey at graduation that focuses on apparent changes or outcomes. Included should be items on relationship to faculty and modes of learning (e.g., classes, learning contracts, internships). This instrument should be relatable to the SBI or equivalent. Any adaptation that meets these criteria is appropriate.

See back cover pocket for
actual copy of this instrument

Tests of Intellectual Competence

What: The Educational Testing Service Undergraduate Program (UP) administers two sets of tests that can be administered to students on graduation. The Aptitude Test is normed on the Graduate Record Examinations and represents a similar kind of indicator on general academic skills. The field and modular tests focus on achievement in specific subject areas. They are normed on the GRE Subject Examinations. Thus, given the national norm groups of the entrance and exit standardized tests, assessments of growth are possible. An institution that tries to use the same test at entrance and exit will, however, face reliability problems.

Despite conversations with several experts on standardized tests, we were unable to learn of any tests of intellectual competence appropriate for postsecondary students that have before-after forms. Thus, in order to conduct longitudinal studies using tests, at least two different tests must be used. An advantage of the UP, as noted above, is that its before-after tests are normed on similar groups so some comparability is possible.

Who: Tests are administered to the original standardized group plus a small comparison group. The comparison group would not have been pre-tested.

Why: Objective measures of cognitive development are important to obtaining an overall picture of student change. Although standardized tests do not measure all aspects of cognitive development, they are generally objective and comparable with national samples. They can be analyzed by various subgroupings, which gives a picture of differences within an institution. Some of the questions that can be answered by standardized tests for graduates include: what is the overall cognitive growth of the students since entrance; does the growth differ by age, sex, or any other variable; does the cognitive growth differ by subject area; does the growth differ by types of learning resources used, and the like.

How: Same as for entrance tests of intellectual competence.

Note: No copies of standardized tests are included here. For information on the variety available or on specific instruments, we suggest contacting the American College Testing Programs (ACT), Iowa City, Iowa; The Psychological Corporation, 304 E. 45th Street, New York City; the Educational Testing Service (ETS), Princeton, New Jersey, and/or any other reputable firm.

Attrition Questionnaire (AQ) (or phone interview)

What: Student attrition is a chronic concern at colleges and universities. Although reasons for leaving are often outside of institutional control, sometimes dropouts are preventable. The Attrition Questionnaire (AQ) focuses on reasons for dropping out as well as possible outcomes from study. Some of the areas include: are you a temporary or permanent withdrawal; when did you first think of withdrawing; what specific problems did you have; with whom did you discuss the withdrawal decision; do you plan any job or educational change; what have you gained from your college experience; how do you now view the institution; and what could the institution do to prevent students from withdrawing?

Empire State administers the Attrition Questionnaire by phone. This method provides a high response rate and gives some of the advantages of interviews (e.g., establishment of rapport, possibility of probing complex answers, etc.). In addition, since the AQ is easily codable, quantitative analysis is possible.

Who: The Attrition Questionnaire is designed for administration to all who drop out from Empire State for eight consecutive months or more. The time required by the phone survey format may, however, necessitate sampling if there are large numbers of leavers. The AQ survey is conducted once or twice in a year.

Why: Dropouts may be costly to an institution. Although attrition is no longer generally viewed as failure, no college or university wants to have features that are driving people away. Thus, the Attrition Questionnaire can serve a useful purpose in identifying such features or in confirming that leavers have left for reasons beyond institutional control. Additional questions answered by attrition studies include: are there patterns in the types of student dropping out by age, sex, socioeconomic status, degree program concentration, and so on; and, on a positive side, has the institution had favorable vocational, educational, or personal outcomes for leavers?

How: The phone survey used at Empire requires two to three capable interviewers. One thing to anticipate is an occasional hostile student who has experienced serious difficulties. The interviews can take as little as ten minutes and as long as thirty. The phone survey with immediate coding makes it possible to complete an entire survey in as little as two weeks. Cost is mostly in terms of time spent by staff.

Adaptation: PERC requires some monitoring of dropouts to learn why they left, specific problems (if any), perceived outcomes, and views of the institution. Any adaptation — face-to-face interview, phone interview, questionnaire — that meets these criteria is appropriate.

Student Attrition Phone Interview

I. Identifying Information

Interviewer ____________________

Date ____________________

1. Student's Name ____________________________

2. Social Security #___ ___ ___ - ___ ___ - ___ ___ ___ ___

3. Phone: home ( ) ____________

work ( ) ____________

4. Call-back instructions: ____________________

____

____

Introduction (suggested opener to phone call): Hi! I'm ________ from the Office of Research and Evaluation at Empire State College. The Office of Research and Evaluation has been conducting studies for nearly three years on many aspects of ESC. Our goal is to identify strengths and weaknesses in the College program in order to improve effectiveness. Periodically, we phone former students who have withdrawn. We are especially interested in learning from them more about why students withdraw, who (if any one) they talked with about the decision, and what they gained from their ESC experience.

If you agree to answer some questions *(and please be assured that participation in this survey is voluntary),* it will take only about 10 minutes of your time. I should also mention that your individual responses will be kept *strictly confidential.* Will you help us?

II. Phone Questions

5. If agreement to cooperate is obtained, ask person to verify withdrawal as of ____________________
(date)

6. Do you consider yourself to be a temporary withdrawal? 1____ or permanent? 2____ visiting student? 3____ completed degree requirements, awaiting administrative processing 4____?

If you plan to re-enroll, when? ____________________
(date)

7. How long were you enrolled?
________1-3 mos.
________4-6 mos.
________7-9 mos.
________9 mos. or more

8. How many learning contracts did you *complete* before withdrawing:
________none
________one
________two
________three
________four
________five
________six or more

9. Were you working on another contract when you withdrew? 1____Yes 2____No

10. During your ESC studies, did you ever change from being a full-time student to half-time? half to full? both? no changes?

________½ to full
________full to ½
________both
________no change

11. Were you full- or half-time when you withdrew?

________full
________half

12. When did you first think of withdrawing from ESC? (Read underlined options if necessary.)

____I wasn't sure I wanted to go to ESC in the first place
____Right after orientation

____As soon as I started my first learning contract
____Later during my first contract
____After completing my first contract
____During my second contract
____After completing my second contract
____During my third or later contracts
____After my third or later contracts
____Other (please specify)

____

____

13. Were there specific problems that influenced you to withdraw? (Read underlined options if necessary. *Check all responses that apply).*

____Problems with bureaucracy (e.g., billing)
____Problems with ESC program and/or procedures (e.g., confusing, too much independence for me)
____Problems with portfolio
____Found ESC too structured
____Problems matching my goals to the College
____Mentor problems (e.g., did not like, unproductive relationship)
____Financial problems
____Personal problems (e.g., health, family obligations)
____Job problems (e.g., too demanding of my time)
____No problems
____Other (please specify) ______________________________

____

14. With whom, if anyone, did you discuss your decision to withdraw from ESC? *(Check all that apply.)*

____my mentor
____other ESC staff (e.g., administrators)
____my spouse
____my parent(s)
____my friends
____other ESC students
____no one
____other (e.g., clergy) (please specify)

____

15. What was the reaction of these people to your decision to withdraw. The options are (1) supported my decision to withdraw; (2) neutral, neither supported my decision nor encouraged me to stay; (3) encouraged me to stay in ESC. (For each person identified in Q.14, repeat Q.15)

responses 1	2	3	
			my mentor
			other ESC staff (e.g., administrators)
			my spouse
			my parent(s)
			my friends
			other ESC students
			other (please specify) ____________

____

16. What are you presently doing?

____working
____student elsewhere
____housewife
____unemployed
____retired
____other (please specify) ______________________________

____

17. If you are working what is your occupation? (please be specific)

____

18. If a student elsewhere, at what institution?

____

what school within it? ______________________________
what department? ______________________________

19. Did this institution accept any of your ESC work for transfer?

____yes ____no ____not sure yet

20. Do you plan any job or educational change for the future? (Check the best one).

____no explicit plans
____I will continue in my present college studies
____I will continue in my present job
____I intend to change to another occupation or job
____I intend to transfer to another educational institution
____Other (please specify) ____________________

____

21. What, if anything, have you gained from your ESC experience? Did it have any effect on your general outlook or the way you view yourself? (Read underlined options if necessary. Check *all* responses that are relevant).

____No effect whatsoever
____I'm disappointed that I did not complete my studies
____I got to know my limitations
____I gained new insight into myself
____For the work I did, I learned a lot
____ESC helped me clarify/identify life purposes
____I increased my self-confidence
____It got my desire for a college education out of my system
____I discovered that I did not need a college degree
____I think I would have done well if not for particular problems (e.g., personal, financial), so ESC was a generally positive experience
____It was a completely negative experience
____Other (please specify) ____________________

____

22. All things considered how do you *now* view ESC?

____very favorable
____generally favorable
____indifferent/neutral
____generally unfavorable
____very unfavorable

Comments: ____________________

____

____

23. What could ESC do differently to help keep students like you from withdrawing? (Check *all* that apply).

____Give more financial aid
____Make assessment procedures less difficult
____Make assessment more equitable
____Make assessment the first thing in a student's career
____More student-mentor dialogue
____Lessen the "red tape"
____Learning contracts should set realistic limits
____Provide more opportunities for the student's family to participate (e.g., open house, coffees, seminars)
____Provide more group studies, residencies, etc.
____Provide child-care service
____Provide better guidance and advising
____Make learning centers more accessible
____Make mentors more accessible (e.g., hire more)
____Increase access to learning resources (e.g., labs, libraries) specify which __________, __________
____Other (please specify) ____________________

____

24. I would (1) ________ would not (2) ________ like to receive copies of reports in this research.

III. Summary

Interviewer's general impression of the respondent (e.g., articulate, candid, etc.).

Elapsed time: __________

Student Interviews at Exit

What: The focus of the exit interview is change in students since entrance. A particular target is value-added by the institution, though any apparent changes are worth noting. While the PCQ is our major quantitative vehicle, interviews link qualitative *chains of evidence*. The kinds of questions asked include: have you changed your goals in any way since enrolling; what are the good things that have happened to you in this institution; what problems have you had; describe your relationship with faculty; what are your future goals (vocational, academic, etc.)? Specific questions will, however, also arise from reviews of student reponses in previous questionnaires and interviews.

Who: The same interview group as has been followed from the beginning of the longitudinal design. Some additional people will be interviewed for comparative purposes.

Why: Qualitative evidence is essential to the PERC multiple perspectives strategy. Thus, while the PCQ mirrors the SBI in providing quantitative looks at entrance and exit, it is just as essential to have interviews at each portal. Analysis will focus on patterns of changes within the various student types and other kinds of breakdown that seem appropriate. Some questions that might be answered by the interviews include: why has a particular type of student had certain kinds of outcomes from the program; why do certain types of students adapt to learning contracts more easily; do students perceive that they have developed in affective areas as much as intellectual areas, and the like.

How: See previous section on interviews (page 19).

Adaptation: PERC requires exit interviews that focus on apparent changes or outcomes. Included should also be questions about relationships to faculty and modes of learning (e.g., classes, learning contracts, internships). Any adaptation that meets these criteria is appropriate.

Student Interviews (At Exit)

1) Goals and Objectives
    a) Have your goals and objectives changed during your study? How?
    b) Do you have any current plans for further education?
    c) Do you have any current vocational plans?
2) People Contacts
    a) How do you and your faculty mentor relate during get-togethers? What kinds of things do you talk about?
    b) Have you developed any friends in the institution?
3) Learning Contracts and Evaluations
    a) Describe how your latest contracts were developed? (Readings, outside resources, etc.)
    b) How was the contract evaluated? How were the appropriate methods of evaluation determined?
4) Outcomes
    a) What have you learned from your study? (be specific)
    b) Have you had any outcomes in personal development areas? (e.g., self-confidence, clarified purposes)
    c) What are you proudest of?
    d) Are there any tangible outcomes from your study?
    e) What are the best/worst things about this college?
5) Other
    Questions that arise from review of other instruments and interviews.

Student and Faculty Rating Forms at Exit

What: The rating forms at exit indicate perceived changes in students in the four areas of cognitive development — communication skills, analysis, synthesis, application — and three of personal development — clarifying purposes, increased awareness, and self-confidence. Each area is rated by both the student and a faculty member on a nine-point scale.

Who: The rating forms are administered to the case study subjects selected earlier. They may, however, be administered to larger groups.

Why: The areas covered in the rating forms are important aspects of student growth. It is useful to obtain multiple perceptions of student growth on these dimensions. Analysis is straightforward calculation of means, although change scores can be calculated using earlier administrations. These change scores are part of the evidence of student growth. By using multivariate techniques, the change scores can be related to other exit measures to provide a fuller picture of outcomes.

How: The rating forms are simple to administer and score. They require one person and can easily be completed by respondents in 10 to 15 minutes.

Adaptation: See page 20.

FOLLOW-UP STRATEGIES

A Graduate Follow-Up Questionnaire (GFQ) and interviews with graduates are useful in discovering the long-term benefits of the students' education. Are students who apply to graduate school admitted; and, if so, how well do they do in their graduate studies? To what extent do they attribute success or failure to their undergraduate experience? Success or failure in a career can also be indicative of the effectiveness of the institution's educational program. Such outcomes as these can only be assessed after students have graduated for a year or more.

Graduate Follow-Up Questionnaire (GFQ)

What: Alumni surveys were among the first kinds of institutional research ever conducted. They are useful, sometimes flattering, and can give a sense of whether an institution is truly succeeding in its stated missions. The Graduate Follow-Up Questionnaire (GFQ) has these aims within the PERC scheme. The GFQ has several parts:

General Information: Age, sex, area of study.
Further Education: Have you gone to graduate school, why, have you finished, did you have difficulty in the application process, why, highest degree aspirations, etc.
Graduate School Experiences: How did you do, were there any skills gained at Empire that were useful?
Present Employment: Occupation, hours a week working, have you tried to change jobs, did a degree help, employment goals, etc.
Evaluation of ESC Experiences: The single most important positive outcome, single most disappointing aspect of the College, intellectual outcomes from college, personal outcomes from college.

Who: The Graduate Follow-Up Questionnaire is sent to all persons who received the SEQ and PCQ as well as to a selected group of others. The questionnaire is administered some time after graduation and repeated periodically.

Why: Outcomes from college are not always immediately discernable. Thus, the PCQ is not the only survey instrument looking at outcomes. In fact, the GFQ is better in terms of learning not just what students' perceived outcomes were but, in fact, what the outcomes really were. For example, a student might think shortly after graduation that he/she knew much about applying learning to practical situations, but after two years of frustration at doing so on a job, their perceptions might change. Thus, the GFQ provides a useful second look at outcomes. It also may reveal other kinds of outcomes: community service outcomes, commitment to life-long learning, and the like.

How: The same as for other survey instruments (see p. 16).

Adaptation: PERC requires a survey instrument administered to graduates a few years after their departure that inquires about graduate school experiences, vocational experiences, and other types of outcomes (e.g., community involvement that relates to education). Any adaptation that meets these criteria is appropriate.

See back cover pocket for an actual copy of this instrument

Student Interviews after Graduation

What: Interviews as a qualitative way of getting "inside" the survey answers are used throughout PERC. A small number will be conducted with graduate follow-up respondents to determine if there is more to the fixed-response answers than comes across on the survey forms. Questions will concern such things as graduate school, employment, and personal changes that have come about as a result of attendance in the College.

Who: A subsample of the original interview group will be interviewed. Perhaps a few others will also be interviewed.

Why: See previous sections on interviews (p. 19).

How: See previous sections on interviews (p. 19).

Adaptation: PERC requires follow-up interviews a few years after graduation so that graduates may be asked about graduate school experiences, vocational experiences, and other types of outcomes (e.g., community involvement that relates to education). Any adaptation that meets these criteria is appropriate.

COST ANALYSIS

What: A complete study of effectiveness must include educational evaluations linked to all related costs. Development of the cost component follows the development of the educational evaluation component. Student academic work is accomplished at Empire State College through learning contracts, which are also the basic unit for evaluation. They serve as the primary analysis point for costs. At other institutions a course might be the appropriate unit. This approach differs markedly from most cost analysis systems. Other systems, such as NCHEMS and CAMPUS-PMS (see Glossary), accumulate costs in centers based on budget categories such as department, college, discipline, and so on, and use the "typical" student as the denominator.

Who: Cost analysis is made for all students in the PERC sample.

Why: The PERC framework starts with a smaller unit of analysis (individual learning contracts) and builds the group costs. This approach facilitates linkage to both quantitative and qualitative assessments of effectiveness that are also made at the individual contract level. For example, the cost of using tutors can be linked to information resulting from the question: "Does use of tutors by students in a business program improve their overall performance and at what costs?"

How: The individual activities that might possibly be employed in one or all of a student's contracts are identified. These activities are analyzed to determine both the source of data and the "triggering" device (i.e., where the information related to activities may be found). The initial trigger is student accounting, which gives us the student number as well as direct information relative to student-aid costs. The student number identifies a specific file that contains all learning contracts and the following information:

°Geographic location of the student
°Degree program
°Level of study (i.e., lower or upper division)
°Contract credit for each contract
°Beginning and ending dates of contracts
°Faculty (mentor) number
°Tutor number
°Description of field work
°External credit hours taken
°Independent Study courses taken
°Residencies
°Module use
°Seminars

Adaptation: PERC requires thorough cost analyses. There are many ways in which to conduct a cost analysis, some complicated and costly, others paper-and-pencil methods. Although any cost analysis technique is acceptable, the most useful ones will allow cost breakdowns to the individual student level.

* * *

The cost analysis framework (see Figure 7) shows the flow of data producing direct costs to be entered at Stage 1 of the contract cost accumulation or further triggering a cost center that will in turn produce cost data for entry. Data is entered for each contract and accumulated in two ways: by recording cost data for each contract engaged in by a single student, and by recording all contracts of all students categorized by program of study. The data then available makes it possible to match educational evaluations with cost data by contract, by total student experience, by program, by geographic location, or by any demographic or educational classification.

The cost aspect of the PERC program will include all expenditures — direct, indirect, and in-kind — regardless of the source of funds providing for the expenditure. For example, the faculty salary cost includes the pro-rated portion of the salaries of all personnel who have been assigned students even though those persons may appear on the payroll in other categories or on a grant payroll not appearing in the operating records of the institution. The inclusion of all costs and the assignment on a contract basis is necessary to facilitate comprehensive decisions related to resource allocations, work load assignments, budget requests, and predictive long-range planning.

The cost analyses discussed herein are currently performed by hand without benefit of a computer. The cost model is presently being computerized and will build on the current accounting system required by the State University of New York without disturbing that system. The next sections explain step-by-step the cost analysis procedures of PERC.

Cost Analysis Procedures

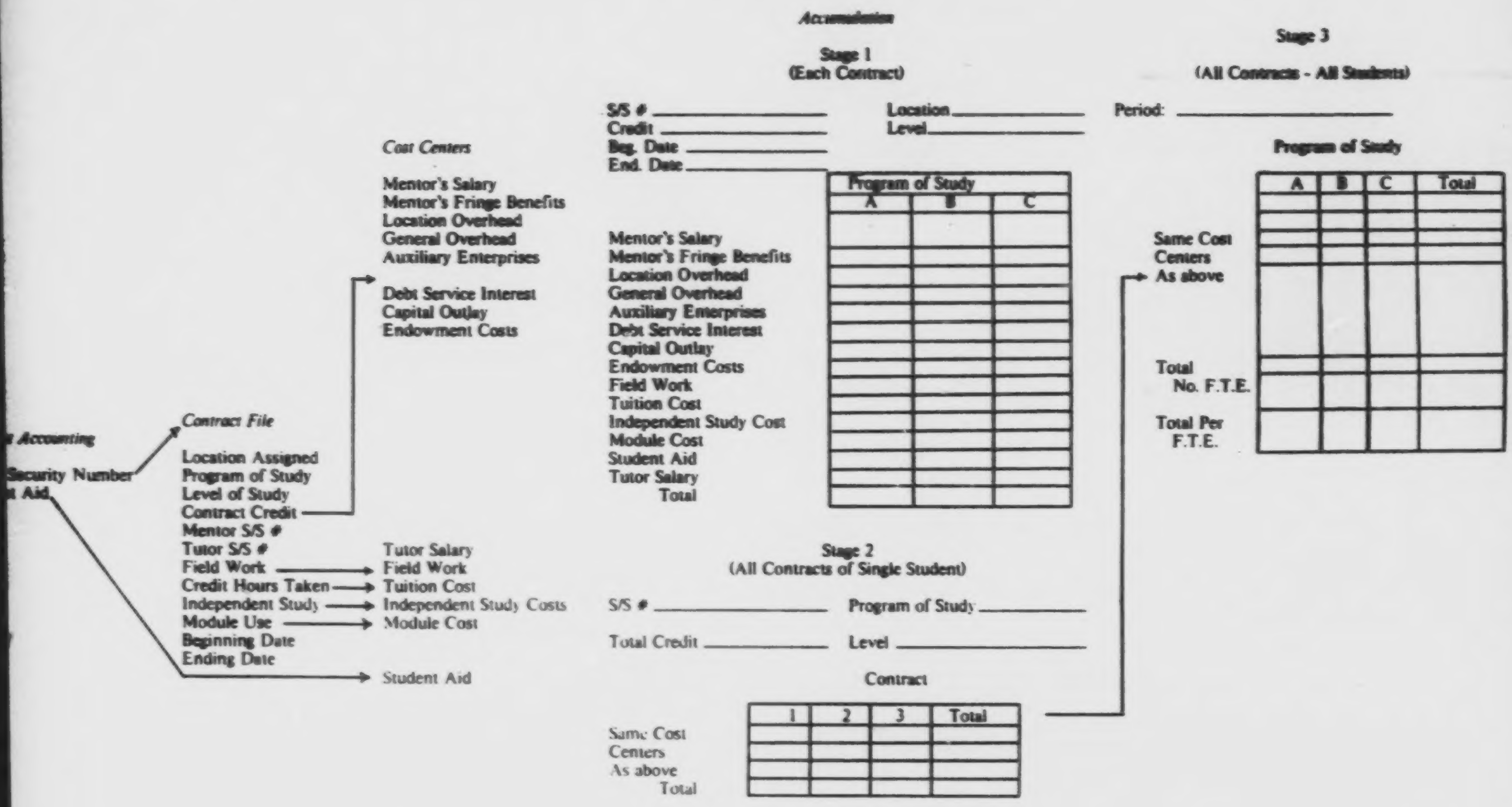
Instructional Salaries: The faculty cost assigned to specific contracts includes all salaries related to instruction – full- and part-time faculty and a prorated portion of the salaries of other College staff who devote some of their time to teaching. Therefore, provision must be made to add the amount of "in-kind" cost of instruction to the faculty salary cost center.

PERC allocates salary costs on an *institutional average basis*. This method protects against misinterpretation of costs, and prevents decisions based upon such things as a high proportion of senior faculty in a given department.

A time study of ESC faculty mentors provides the basis for allocating portions of total mentor salaries to instruction, location administration, and general administration. The actual practice followed in the allocation of instructional salaries is found in the Cost-Analysis Appendix, Form CA 1. This form provides all data to establish a per-month FTE salary cost. This figure is entered on each contract and provides information to compare against planned performance.

Faculty Fringe Benefits: Total instructional costs must include fringe benefit provisions. The allocation percentage employed by the State University of New York is set each year and applied to the average FTE/month salary of faculty. Institutions paying fringe benefits directly will develop a percentage figure based on total salaries and on the full cost of all benefits including all types of retirement,

Figure 7
Empire State College Program Cost Analysis Model


Accumulation
t Accounting
Security Number
t Aid
Contract File
Location Assigned
Program of Study
Level of Study
Contract Credit
Mentor S/S #
Tutor S/S #
Field Work
Credit Hours Taken
Independent Study
Module Use
Beginning Date
Ending Date
Cost Centers
Mentor's Salary
Mentor's Fringe Benefits
Location Overhead
General Overhead
Auxiliary Enterprises
Debt Service Interest
Capital Outlay
Endowment Costs
Tutor Salary
Field Work
Tuition Cost
Independent Study Costs
Module Cost
Student Aid

Stage 1
(Each Contract)

S/S # ____________ Location ____________
Credit ____________ Level ____________
Beg. Date ____________
End. Date ____________

	Program of Study		
	A	B	C
Mentor's Salary			
Mentor's Fringe Benefits			
Location Overhead			
General Overhead			
Auxiliary Enterprises			
Debt Service Interest			
Capital Outlay			
Endowment Costs			
Field Work			
Tuition Cost			
Independent Study Cost			
Module Cost			
Student Aid			
Tutor Salary			
Total			

Stage 2
(All Contracts of Single Student)

S/S # ____________ Program of Study ____________
Total Credit ____________ Level ____________

Contract

	1	2	3	Total
Same Cost Centers As above				
Total				

Stage 3
(All Contracts - All Students)

Period: ____________

Program of Study

	A	B	C	Total
Same Cost Centers As above				
Total No. F.T.E.				
Total Per F.T.E.				

insurance, vacations, holidays, and so on. Two fringe benefit percentage figures are computed since "fringe benefit packages" are generally different for instructional and noninstructional staff (see Form CA IV A).

Location Overhead: It is almost impossible, and certainly impractical, to identify support activities at each location of the College and attempt to assign them on an individual basis to each contract. Instead, these items of expenditure are gathered into a "location overhead" cost center and an FTE/month figure charged to the various individual's contracts. This cost center includes the following elements (see Form CA IV):

1. Nonteaching professional salaries
2. Nonprofessional salaries
3. Fringe benefits
4. Rent (actual or "in-kind")
5. Other plant maintenance costs
6. Supplies expenditures
7. Equipment expenditures
8. Orientation costs
9. Portion of mentors' salaries for local administration

The ESC application of PERC uses as "location" each learning center and unit in the College. Other institutions should use the smallest appropriate administrative unit, probably the department. Form CA VI deals with the Statewide Center at ESC. As previously noted, the Statewide Center is staffed by unit coordinator/mentors performing both instructional and administrative functions.

Nonteaching Professional Salaries: At Empire, there are four classifications of nonteaching professionals assigned to locations: deans, associate deans, assessment specialists, and administrative assistants. Nonteaching professionals spend varying degrees of time in location administration, college administration, and instruction. Because the variations are wide, it is necessary to examine each position to obtain the actual portion of salaries devoted to the various activities and then to allocate instructional costs. Form CA II in the Cost Analysis Appendix accomplishes this task.

In addition, at each learning unit within the Statewide Center there are unit coordinator/mentors who spend significant portions of time in direct contact with students. A modified approach (Form CA III) is used to reflect these costs. As with faculty salaries, an average institutional salary is determined for nonteaching professionals.

Nonprofessional Salaries: Personnel assigned to locations are tabulated and the fringe benefit percentage applied to obtain an average salary per location at Empire. Personnel in this category assigned to collegewide activities are also tabulated and the fringe benefit percentage added and entered on Form CA V for subsequent redistribution to the various locations on an FTE basis.

Rent: This item requires tabulation of square footage at each center and unit and a determination of the cost of actual rental agreements or a calculation of "in-kind" cost based on the going square-foot rental cost in the area.

Other Plant Maintenance Costs: Actual expenditures, if any, will be recorded. "In-kind" contributions have to be determined on a location basis and may include custodial and maintenance services, heat, and lights.

Supplies and Equipment: Actual expenditures of the centers/units will be recorded.

Orientation Costs: Empire State has student orientations throughout the year. Costs vary among locations and include the time of personnel as well as added costs for refreshments, supplies, and postage. At this time, the only costs recorded are the easily identifiable costs such as refreshments and printing. A subanalysis is planned to uncover all costs attributable to orientations.

Distribution: All of the above costs are accumulated on Form CA IV and an FTE/month figure is developed for each location.

General Overhead (see Form CA V): This cost center includes all costs directly associated with the offices of the president, vice-presidents, admissions, registrar, research, business, assessment, learning resources, and alumni activities. Identification of direct costs of various activities poses no significant problem. The total general overhead cost will be increased by the appropriate portion of faculty salaries, nonteaching professional, and nonprofessional salaries devoted to college administration. The total figure is divided by twelve months and the College average FTE to develop an FTE/month allocation. As with all FTE/month figures, this is done for planned FTE and actual FTE.

Auxilliary Enterprises, Debt Service, Capital Outlay and Endowment Costs: These expenditure categories do not exist at Empire State College. They are, however, in existence at most institutions. They should be included for those institutions incurring such expenditures in order to provide a true total cost.

Development Costs: A cost incurred by all institutions — and often to a higher degree by nontraditional programs — is for the development of new programs, concepts, delivery systems, and so on.

In Empire State College, development costs are generally attributed to unit or center establishment, module construction, new or changing programs of study, field studies, and group studies. PERC suggests establishing a useful life of each unit or center, module, new program of study, field study, or group study. For example, the useful life of a learning module or other form of study guide might be five years. This useful life figure is based on frequency of text revisions (Form CA VII) and other similar considerations. A regional learning center, on the other hand, should have a longer useful life. As the annual budget is constructed, funds allocated for the various kinds of development are identified and accounted for as a transfer to a deferred asset account. Total funds for specific developments are divided by the useful life with the resulting annual figure allocated to current operating expenses.

Unit or center development costs are made part of the location overhead. Field and group studies are allocated to the location and program by dividing the annual allocation by the use factor. The annual charge for module development is divided by the use factor and assigned to programs on this basis.

Learning Resource Costs: This component of the ESC program develops when a student is advised to take a formal course at another institution. The information related to courses taken is found in the contract file. Actual cost is determined by the credit-hour cost at the institution attended.

Independent Study Cost: This expense item evolves when a student takes a specific course in the State University Independent Study (correspondence course) program. The contract file reveals the course or courses taken and the cost.

Tutor Cost: Cost for tutoring is determined by examining expenditures from the Accessory Instruction Fund. If no fee was paid (i.e., tutor volunteered), PERC assigns the institutional average hourly cost of tutors.

Student Aid: Costs are allocated to the contract on the basis of the size of the award for the time that the learning contract covers.

Allocation to Student Learning Contracts

The actual allocation process, once all the calculations are made, is a simple matter. The Stage I form (see Figure 7) includes numerous types of expenditures. Actual transfer from other forms to this form is made by taking the course credit (FTE/months) and multiplying it by the source FTE/month cost or, in some cases, the actual expenditure.

Listed below are the items of expenditure in use at ESC and the source of data:

Mentor's Salary	CA I	FTE/Month Cost
Mentor's Fringe Benefits	CA I x %	FTE/Month Cost
Location Overhead	CA IV	FTE/Month Cost
General Overhead	CA V	FTE/Month Cost
Field Work	Account Records	Actual or Deferred
Tuition Cost	Institution Charge	Actual
Independent Study	Catalog	Actual
Module Cost	CA VII	Deferred Unit Cost
Student Aid	Student Accounting	Actual FTE/Month
Tutor Salary	Accounting Records or Assigned Costs	Actual
Residencies	Accounting Records	Actual
Seminars	Accounting Records	Actual

CONCLUDING NOTE: DESIGN STRATEGIES

The preceding sections describe the PERC instruments and the rationale for them. Few institutions will be able to implement the entire framework. But to carry out PERC, certain minimum conditions should be met in choosing instruments. Briefly, these minimum characteristics are:

1) The relationship between *outcomes* and *costs* is the primary focus of the evaluation. That is, we must trace what happens to students (intellectually and personally) while attending X institution and how much money was spent in various programs to achieve those results. By doing this we can see (ideally) what it costs to achieve different outcomes and use this information in program evaluation, budgeting, and long range planning.
2) The evaluation study produces *change* information about students, including pre- and post-measures on the same subjects. That is, we obtain data (formally and informally, hard and soft, quantitative and qualitative) on specified intellectual and personal attributes of students at entry and at completion of their program. The key question is, then: how much have students moved or changed in specified characteristics while participating in X institution's program?
3) Data about student change and development is collected from *two sources,* the student him/herself and his/her mentor. It is important in PERC evaluation to hear from more than one person because much may be learned by comparing multiple reports.
4) *Two types of measurement,* quantitative and qualitative, are used to study and evaluate student change and

development. Over-reliance on quantitative measures often overlooks some rich and sometimes subtle information about students. Further, qualitative information, particularly case studies, generates continuous data necessary to sort out institutional impact on students.

5) Data is evaluated and interpreted from *two points of view,* one inside and the other outside the institution (program). This step and condition moves reports on "outcomes" to measures of "effectiveness;" that is, "standards," "quality indicators," or "indices of success" are applied to judge the value or desirability, even the acceptability, of observed student outcomes.

Some institutions will wish to move to higher level program effectiveness and related costs studies. For them, other elements are essential.

6) Faculty professional and career development is examined by itself and in relation to student learning and change.
7) The evolution and development of academic programs (curricula) is thoroughly investigated and documented.
8) Case studies are made of student learning and development using personal interviews and analysis of various student documents, products, and reports.
9) The minimum time to evaluate student development and change is the length of his/her program. Measurements are taken of students at entry, mid-stream, and at exit.

At Empire State College, the developmental site of PERC, all nine elements are being addressed, thus providing a comprehensive test of a variety of evaluation techniques and strategies. Other institutions are encouraged to make adjustments in the framework and methods discussed in this *Handbook* for application locally.

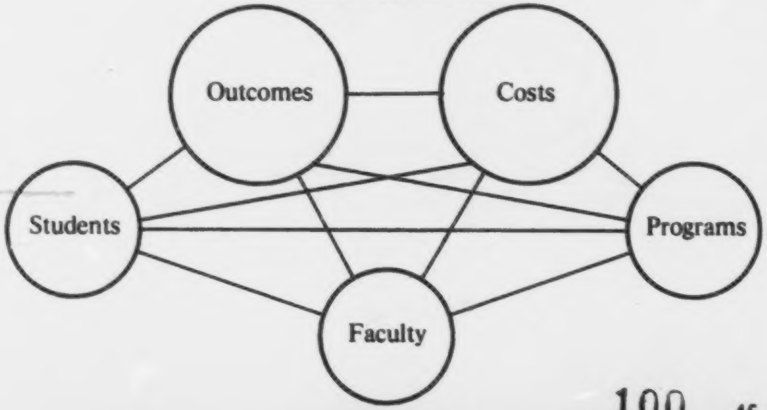
CHAPTER 4
APPROACHES TO DATA ANALYSIS

The basic strategy in PERC analyses is to reduce the complex, diverse types of data into forms understandable and meaningful to multiple audiences. This chapter describes some of the optional ways to look at the relationships suggested in the PERC framework, some tactics for research analysis, and some illustrative analyses. The choice of analysis strategies should depend largely on policy questions facing the institution or program.

RELATIONSHIPS IN THE PERC FRAMEWORK

The PERC framework (see Figure 8) suggests that outcomes and costs are interrelated with types of students, faculty, and programs. The goal informing this framework is to learn what kinds of students change in what kinds of ways following what kinds of programmatic experiences working with what kinds of faculty and at what costs. Building on this basic approach, there are four levels of data analysis. Each focuses on the outcome/costs relationship and progressively introduces information about students, faculty, and programs so that impact of these dimensions can be analyzed separately or in combination.

Figure 8
PERC Framework



Level I: Outcomes-Costs

The most basic level of analysis of PERC is an examination of the relationship between outcomes and costs. The effects of different student, faculty, and learning program activities on the outcome/costs ratio are not examined in this level of analysis. Illustrative questions for Level I analysis are:

1) **Does the type of outcome vary by average experience costs?**

   Does the average change for the various outcome measures — satisfaction scores for personal goals, results of standardized tests, cognitive and affective scores from rating forms, and so on — vary by the average experience costs? Note: a total average experience cost can be computed from mentor costs, tutor costs, course costs, overhead costs, and so on, but a total outcome score cannot be computed since the different outcome measurements are not additive. For example, in one recent ESC study cognitive and affective change scores for 50 graduates was 2.1 on a nine point scale and the average experience cost was $1303. The current FTE budget cost per student is $2136 but there is no corresponding outcome measure available. PERC data begins to fill this void.

2) **Does the type of outcome vary by variations within the type of costs?**

   What explains the differences in costs across outcome types? What is the pattern of costs associated with each outcome type? Average experience costs for different outcome types will contain different combinations of mentor costs, tutor costs, module costs, course costs, and so on. Although a study of outcomes and costs under question 2 has not yet been conducted, some relevant experience does exist. In comparing the educational outcomes for half-time and full-time students on four outcome measures, no significant learning differences emerged, but differences in costs were found. These costs differences were explained by the length of time in the program and use of tutors.

Level II: Outcomes-Costs-Students

This level of analysis adds student characteristics so that the analyst can examine how the outcomes-costs relationship is influenced by different students and student characteristics. The simplest student groupings are based on age, sex, amount of prior learning, and so on. But students can also be categorized as "beginners," "achievers," and the like. Such classifications are subtle and complex but can lead to useful comparisons.

1) **Do certain students learn and change more than others?**
   Do "achievers" and "persisters" gain more in intellectual and personal skills than other student types? Do full-time students learn and change more than part-time students? How much learning or change occurs for students who study a minimum time (e.g., six months) versus those students who spend significantly longer (e.g., one or more years) with the institution?
2) **Do the costs of education vary by student characteristics?**
   Do some student types cost more to deal with than other student types? Do some students, because of their rich backgrounds and special interests, place unusual demands on colleges and hence run costs up significantly? Are there significant cost differences between independent (i.e., can work alone) and dependent (i.e., require much personal support and guidance from faculty and others) students?
3) **Do individual student characteristics affect the relationship between outcomes and costs?**
   How do students with "rich" academic backgrounds and experiences affect the costs to achieve certain educational outcomes? Is the relationship of costs to outcomes influenced by part- versus full-time status, younger versus older students, independent versus dependent learners, and so on?
4) **Does the relationship between outcomes and costs vary for different types of students?**
   What costs and outcomes are associated with various student types? For certain student types are some outcomes (e.g., personal autonomy and goal clarification) achievable at less cost than other outcomes (e.g., comprehension, critical thinking, or communication skills)?

Are certain educational and personal outcomes more likely to be achieved with some but not other student types and at what costs?

Level III: Outcomes-Costs-Students-Faculty

Analysis at this level involves consideration of faculty variables (e.g., individual characteristics like age, sex, and prior academic experience and various ESC faculty roles such as "tutor" or "facilitator") and assessment of their impact on the outcome-cost relationship. Illustrative questions for Level III analysis are:

1) **How important is the match between student and faculty characteristics in promoting student learning and development?**
Does learning vary by type of student/faculty match? Are certain matches more productive (greater outcomes) than others? What about cost variations across different matches? For example, some research findings suggested that student and faculty have distinctive learning/teaching styles. Placing students who desire independence with faculty who foster self-directed learning is one way of matching students with faculty that can facilitate effective learning and growth.
2) **Do certain faculty obtain better results with their students?**
Do "facilitators" tend to get more and stronger student learning and change than "tutors"? Are younger faculty more effective with students than older faculty? Do tenured faculty turn in better results with students than nontenured faculty? Are faculty in certain units or departments generally more effective with students?
3) **What is the relationship between faculty characteristics and costs?**
Do "tutors" cost more than "facilitators"? Are faculty in certain units or departments generally more expensive? Are faculty from certain academic backgrounds more likely to employ costly learning resources?

Level IV: Outcomes-Costs-Students-Faculty-Programs

Level IV analysis is the most complex since it includes all five concepts and all possible relationships among them. This level of analysis may not be achievable for some time. Using this analysis, one can answer a rich variety of program effectiveness and related costs questions. The addition of programs makes it possible to examine the effects on outcomes and costs of such factors as the learning site, student/faculty relationships, use of learning modules, courses taken at other institutions, and the like.

Illustrative questions for Level IV analysis are:

1) **What is the relationship between faculty and programs?**
Is there a significant relationship between faculty background (e.g., older, more traditional, conservative) and type of learning activities (e.g., one-to-one lecturing) prescribed and practiced with students? Are faculty who have significant nonacademic work experience more likely to reach beyond themselves to identify and use various community resources in student learning programs?
2) **Do certain programs (learning activities) achieve more and stronger student learning and development outcomes?**
Which educational activity produces the best results — tutoring, independent study courses, courses taken at other institutions, field study, work study, internships, learning modules, and so on?
3) **What is the relationship between programs and costs?**
Is it more or less expensive to provide education via Empire State learning centers versus learning units, directed studies versus contract learning, using many tutors versus other types of resources? At other institutions, is it more expensive to produce a graduate of one department than another?
4) **What kinds of students change in what kinds of ways, following what sorts of learning experiences, mediated by what kinds of institutional arrangement? What are the differential costs of these student learning experiences?**
When this primary research question is answered, educators will be able to understand more clearly and precisely what it takes to achieve maximum learning and development for students with diverse backgrounds, interests, resources, and motivations.

These, then, are the four basic analysis strategies for PERC as it is conceptualized and presented in this *Handbook*. Level IV analyses provide the opportunity for highly complex and rich analyses. The varieties of data needed for such outcome-cost analyses include individual characteristics and typologies of students, faculty, and programs. The following subsection discusses some of the tactics used at Empire in dealing with the many data reduction and analysis questions.

TACTICS IN PERC ANALYSES

The phrase "data-analysis tactics" refers to the processing of quantifiable data. Throughout this *Handbook*, we have suggested using a multiple perspectives strategy that produces chains of quantitative and qualitative evidence and reporting in forms understandable to multiple audiences. Here are some suggested options for handling diverse data.

Step 1: Identifying the Function of Variables

A range of questions is being asked of the many PERC respondents. Each piece of data can be considered a variable for analysis, so the first analysis step is to decide what will be the function of each variable. Variables can have one or more of three functions: *classfication* (which separates groups of subjects for further analysis, e.g., by sex, age), *description* (which elaborates and clarifies relationships), and *outcome* (which helps describe the achievement of goals). A given variable can be a descriptive variable from one perspective and, say, an outcome variable from another. For example, if a student's score on a test of intellectual competence at graduation is used in an analysis of cognitive achievement, it is an outcome variable. If the focus is on understanding student growth, it would be a descriptive variable. To make full use of the three functions that variables may have, PERC recommends that each variable be specifically evaluated in terms of the function to be served before conducting any other types of analysis.

Step 2: Reducing Data

After administering the various PERC instruments, the responses should be coded for computer entry. Empire State coding instructions for each of the instruments in Chapter 3 are available from the Office of Research and Evaluation. Other recognized coding styles are equally acceptable.

After coding and preparing data for computer processing, the computer file needs to be edited which involves four steps:

1) Initial analyses — generation of means, standard deviations, and percentages for each variable. (Statistical Program for the Social Sciences, available from the National Opinion Research Council University of Chicago is the package currently used at Empire State for these and subsequent analyses. Other packages are acceptable). Initial descriptive reports can be made at this point and are often useful.
2) Handling missing data — several methods are described in various statistical books. But since PERC is primarily multivariate in concept, simply substituting the item mean on continuously coded (scaled variables) is recommended. This helps maintain a maximum number of cases for later complex multivariate analyses. If a variable is coded dichotomously (0 to 1), the missing data coded as zero is automatically ignored.
3) Removal of variables with low variance — if 95-100% of the respondents choose the same response, the item is not discriminating and should be removed. It cannot be meaningfully related to other variables. If, however, responses seem to reflect true homogeneity of feeling (e.g., 99% of faculty really do read the newspaper), this may be a powerful aspect of the descriptive reports of marginals.
4) Removal of variables with low response rate — if few respondents answered a given question, the researcher may want to eliminate the item from further consideration. Sometimes nonresponse conveys information, however, and this possibility should be considered.

The next aspect of data reduction involves comparing each describer and outcome variable across all levels of the classification variables. Common classification variables include sex, location, age, and so on. One procedure is to use cross-tabulations and show the proportions of responses. Another procedure, which works well on all continuous-scale and dichotomous-coded variables, is to use analysis of variance to detect group differences. Again, the PERC strategy of *describing* the outcomes-costs relationship makes the descriptive and data-reductive uses of analysis of variance appropriate.

At this point, two other types of assessments useful in general reports can be made: profiles of each classification group and univariate descriptions of group differences. By making a table of F-ratios (an outcome of analysis of variance), one can also decide which variables can be removed in later multivariate analysis on the basis that they do not help distinguish among groups. Such data reduction is difficult from a cross tabulation table.

After this univariate data reduction step, two further types of data reduction techniques are useful. One is scale construction by *a priori* weighting, which is used when several items relate to a common theme. For example, several items asking about satisfaction might be weighted with +1 or -1 depending on the direction of agreement. Adding up the total gives a satisfaction index for each respondent.

Another data reduction technique is factor analysis (Cohen, 1968). Actually this term describes several procedures each with its own procedures, rules, and uses. All share the role of reducing a set of variables to a smaller number of linear functions that account for the variation in the variable sets. Before using the technique, it should be studied in a statistical book, for example, Statistical Programming for the Social Sciences (SPSS), (Nie, Bent, and Hall, 1975). But here are some suggested basic steps in factor analysis:

1) Separate the variables into sets that appear, from previous analyses, to relate. As a general rule, there should be four times as many subjects as variables in any given factor analysis.
2) Perform a principal factors (in SPSS, PA 2 option) factor analysis using either quartimax or varimax rotation on all factors with an eigenvalue exceeding 1.0.
3) Select as important contributors to a factor all variables whose correlation with a given factor (factor loading) exceeds .30.
4) Place the above variables together and try to identify the construct that they together represent (e.g., satisfaction, achievement orientation, etc.).
5) Construct a new variable (in SPSS using variable transformations) that consists of the weighted algebraic sum of all variables included in the earlier construct. Weights should be assigned as +1 or -1 depending on the sign of the factor loading.
6) Substitute the newly constructed variables for the original variables in the set. These can now be used in analysis of variance to determine their discriminating power.

The constructs from factor analysis or *a priori* weighting can easily be described in presentations to any audience. For example, a student type might emerge from factor analysis. Description merely expounds on the variables on which the factor is built.

Step 3: Multivariate Analysis

The previous levels dealt with only one variable at a time. Even though the scale construction and factor analysis sections spoke of grouping several variables, the results were new single scale scores, which are interpreted singly when entered into analyses of group differences. Step 3 describes a method for dealing with the relationships among many variables, which may come from several research instruments over time in preparing descriptive analyses. It is especially useful in relating the different types of data into chains of quantitative evidence. This subsection does not present much depth. For that, one should consult a recent statistical book (e.g., Tatsuoka, 1971) since older ones do not present such techniques as multiple discriminant analysis.

Multiple discriminant analysis, the recommended technique for PERC, is essentially a combination of factor analysis and analysis of variance. Its primary function is to assess group differences in multivariate terms. That is, a group of variables is analyzed in such a way that one or more linear functions (regression equations) are generated. These functions are uncorrelated with each other and maximize the difference among categories of a classification variable. In brief, here are the procedures for multivariate discriminant analysis:

1) Define the groups on which to differentiate.
2) Choose the variables to be included. The number of variables should not exceed the number of subjects in any one classification group.
3) Run the discriminant analysis.
4) Find the number of discriminant functions that are significant. This means that the groups are significantly different when all variables are considered.
5) Find the discrimination power of the discriminant function. This step tells how much variation in the variables can be predicted by knowing to what group they belong.
6) Find the group centroid (analogous to a mean) on each discriminant function.
7) Look at the factor loadings on each discriminant function. These are simple correlations between each variable and the discriminant function. Those that correlate highly best describe what the function means.

To recapitulate, a variety of analysis levels is suggested that combine and reduce data while allowing descriptive reports at any time. Because the outputs of each analysis can be put into straightforward descriptive terms, the data should be understandable and meaningful to anyone even though the analyses themselves are complex.

INTEGRATING ANALYSES IN PERC

Although the options presented in the section above will help in reducing the complexity of the various types of analysis in PERC, major challenges remain. One is integrating quantitative with qualitative findings, a vital aspect in establishing chains of evidence. The analysis tactics suggested above will apply to quantitative data only. Thus, case study findings must be introduced to explain the various changes and relationships found. For example, a quantitative finding might be that students improve in ability to write when they study with certain faculty members. Why? Perhaps the interviews will discover that these faculty work with students in special ways (e.g., perhaps these faculty require complete rewrites of all papers that have even minor errors in logic or grammar). Without the quantitative instruments, PERC might not be able to demonstrate growth. Without the qualitative techniques, explanations for the growth might be difficult to find. Thus, integrating quantitative and qualitative techniques is an essential part of a full analysis.

Another integration problem is caused by the longitudinal design. While the multiple discriminant analysis should help relate entrance data with that developed later, it is no panacea. Again, the qualitative information gotten throughout a student's career will be essential to creating chains of evidence. PERC is not, however, an exact science. Integrating the analyses from the various stages in a student's career will require a fair amount of intuitive feel for both the data and the institution. Part of the multiple perspectives approach, multiple evaluators, should be of some assistance here. As noted previously, the PERC staff is not set up as a final judge of program effectiveness. It is simply one of several evaluators of the data. Thus, the integration of the multiple data types drawn from multiple sources to explain complex phenomena is not the burden of any one person or group. Effectiveness is, to some extent, in the eyes of the beholder.

The next section demonstrates some of the analysis dimensions discussed in this chapter by using illustrative data from the Empire State Mini Cost Effectiveness Study (MCES). The MCES focused mainly on Level I (outcome-cost) analyses while exploring the multiple perspectives strategy. Analysis tactics were fairly simple, essentially Step 1 and part of Step 2. The aim was to look at data on a modest sample of students to show how policy implications can be uncovered by PERC. The following section presents the data and some analyses; Chapter 5 examines some policy implications of this research.

ILLUSTRATIVE ANALYSES FOR POLICY QUESTIONS AND PERC

Major analysis questions, given all of the options, are what to analyze and to what end? PERC suggests a policy analysis approach since a primary purpose of the framework is to inform decision-making.

The Mini Cost Effectiveness Study (MCES) provides an opportunity to demonstrate how data collected under the PERC framework can be brought to bear on policy questions. In order to achieve this objective, we decided on a research strategy that was essentially *post hoc* in design. The basic longitudinal design of the PERC study could not be tested in the MCES because too much time would be required to follow students from time of entry to graduation. Therefore, we selected recent graduates to reconstruct their learning experiences.

Fifty recent graduates (as of summer and fall 1974) were selected on the basis of two criteria. First, the graduates were to be equally chosen from the learning centers and learning units. Second, they were to represent three areas of study only — the arts; community and human services; and business, management, and economics. With this research design established, we identified a policy question selected from the many possibilities to illustrate the use of data in a policy framework.

Student Mix in a College

A question that concerns the students, faculty, and administration of every college is the composition of the student body and the effects of that mix on student learning and costs. A common institutional research response to the question of the current mix of the students on a given campus is to report the demographic characteristics of the students. Such reports usually include age, sex, marital status, socioeconomic status, and geographical origins of students (Feldman & Newcomb, 1969). In PERC research other variables that affect student mix are added to the more standard ones. These variables include place bound versus mobile, half-time versus full-time, and different areas of study. The PERC framework not only provides the statistics that *describe* the mix but also provides a way to *link* outcome data and related costs to the factors that affect composition of the student body. To illustrate and provide a context for discussing policy implications (see p. 57), outcome and cost data are presented for student enrollment status and area of study.

Student Enrollment Status (Full-Time/Half-Time)

The effect of student enrollment status on outcome change and cost has been a question debated in Empire State College for several years. Effectiveness arguments have been made for either side of the issue. The case for the full-time student has been articulated: full-time students should be able to complete their degree programs in a shorter period of time and should be able to obtain the educational benefits of a more intense learning experience. Such concentrated learning therefore leads to greater outcome change.

Advocates for the half-time student argue that learning contracts can be spread out over a longer time period allowing the student to absorb gradually his/her learning and critically reflect on his/her education. Since the majority of students carry heavy job, family, and other responsibilities, half-time students are in a better position to accommodate and integrate contract learning with their daily lives. Proponents of this line of reasoning contend that contract learning for half-time students will have a greater and longer-lasting impact than for full-time students.

From a cost standpoint, half-time and full-time students were expected to cost about the same as they completed their degree programs. There are, however, some pressures for a student to study full-time. For example, full-time students may obtain some financial aid supports (e.g., Tuition Assistance Program) that half-time students do not. Such financial aid supports provide strong incentives for low-income students to study full-time even though their other commitments may make such a study load impractical. This overcommitment may in turn result in those students taking longer to complete the program, thus offsetting some of the financial aid provided.

In order to test out the merits of the full-time/half-time argument with the MCES graduates, we first sorted out the learning contracts by enrollment status and then classified the graduates into appropriate categories. A summary of the outcome and cost findings for the graduates' enrollment status is shown in Figure 9.

Before discussing the data in Figure 9, a few comments should be made about the format of the table and the manner in which the data is displayed. The PERC framework adopts a multiple perspectives strategy for assessing outcomes and related costs. Four different evaluation techniques are displayed in Figure 9: student ratings of outcome change, mentor ratings of outcome change, tutor ratings of outcome change, and the Office of Research content analysis score of contract learning. Each of these evaluation techniques has the related costs (experience and monthly, see Glossary) calculated for the number of graduates involved. Thus, the data is organized for each variable introduced (e.g., enrollment status) so that comparisons can be made across the evaluation techniques. Finally, tests of statistical significance were run for both outcomes and experience costs so that the reader can easily determine the most important findings.

The basic finding, as presented in Figure 9, is that there is no significant difference generally regarding outcome change for full- or half-time students but that there is a significant difference regarding average experience costs: full-time students cost approximately $200 to $250 more than half-time students.

On examining the student, mentor, and tutor ratings, we find no difference between full-time and half-time students. For the content analysis scores, however, half-time students scored significantly higher than full-time students. All 50 graduates were included in this scoring judgment and the content analysis process was checked to insure high reliability. It is significant that the content analysis scores, which were generated by a different research technique from the rating strategy, has in fact produced an important secondary finding to the major finding cited above.

In reporting the costs of the outcome changes, two different methods — *average experience* and *average FTE month* — were used. It is important to an understanding of PERC to know that ESC's flexible academic calendar permits a student to graduate with a minimum residence of six months (providing there was a maximum advanced-standing award of 26 months) or can take as long as 32 months — the equivalent of four traditional years (with no advanced standing).

In a more traditional setting, cost reports are generally related to a uniform and standardized academic calendar and costs are displayed on an annual basis. The flexibility of the ESC program requires that reporting be done on a learning experience basis. Therefore, the *average experience costs* for MCES graduates shown in Figure 9 are for the entire length of experience at the College. They are not the equivalent of a traditional college's annualized cost figures. The average experience cost is the result of adding all costs attributed to the learning experience of each student in order to complete his/her degree. With grouped data, the average experience cost refers to all the costs incurred by a group of students divided by the number of students in that group. For example, the 29 full-time students had an average experience cost of $1369.

There is a rather consistent $200 difference in the average experience costs across all four evaluation techniques between full-time and half-time students. Full-time students cost more in large part because full-time students take one and one-eighth more months of credit to complete their degree than do the half-time students. For this additional one and one-eighth months of credit, there is no recognizable outcome impact for the full-time student.

Figure 9
Summary of Outcome and Cost Findings for MCES
by Enrollment Status (FT/HT)

		Multiple Evaluation Techniques					
		Student Rating				Mentor Rating	
Enrollment Status	N	Mean Change	Avg. Experience Cost**	Avg. FTE Monthly Cost**	N	Mean Change	Avg. Experience Cost
Full-Time	29	2.1	$1368.78	$190.78	26	2.1	$1394.94
Half-Time	14	2.1	$1169.24	$190.34	14	1.7	$1177.98
Total Cases	43	2.1	$1303.51	$190.65	40	2.0	$1319.00
Significance-Outcomes		t = 0; d.f. = 41; p = NS				t = 1.25; d.f. = 38; p = NS	
Significance-Costs		t = 2.25; d.f. = 41; p = S*				t = 1.98; d.f. = 38; p = NS	

*All relationships marked with an asterisk were statistically significant at the .05 level using the t test. The t tests on costs were calculated only for the average experience cost. S stands for significant, NS for not significant.

**Average experience cost includes all the costs incurred by the student in order to complete his/her degree. The average FTE monthly cost refers to all the costs incurred by a specific student divided by the months of credit received.

The second cost figure included in Figure 9 is the *average FTE monthly cost.* This figure is calculated by dividing the average experience cost of each student by the months of credit that student received. With group data, the average FTE monthly cost for full-time students, for example, is determined by dividing the total average experience costs for the 29 students by the total average FTE monthly costs for the same students. In Figure 9, the average FTE monthly cost for full-time students is $190.78.

Displaying costs in this way achieves two purposes. First, the FTE monthly cost standardizes the time variable since students at ESC have degree programs of such varying length. The monthly cost figure permits comparisons among different groups of Empire State students. Second, the calculation of an FTE monthly cost permits comparison of ESC student costs with annual FTE costs of other institutions since monthly costs can be aggregated easily into an annual figure.

There is a direct relationship, then, between the average experience cost and the average monthly FTE cost since the latter is determined by dividing the former by the months of credit earned. The FTE monthly cost may, however, vary significantly from one student's learning experiences to the next because other variables besides time can influence the monthly costs. Such variables as use of tutors, location, area of study and so on may contribute to differences in monthly cost figures.

It is striking in Figure 9 that the average FTE monthly costs are almost the same across each of the outcome evaluative techniques. This finding suggests that the length of time in the program accounts for almost all of the experience cost differences. The differences in monthly costs almost disappear when the length of time variable is controlled (i.e., standardized for both full- and part-time students). There is, however, a major exception in the tutor rating monthly costs

	Tutor Rating				Content Analysis			
Avg. FTE Monthly Cost	N	Mean Change	Avg. Experience Cost	Avg. FTE Monthly Cost	N	Mean Score	Avg. Experience Cost	Avg. FTE Monthly Cost
$190.89	17	1.5	$1582.35	$196.35	34	14.4	$1389.02	$191.20
$191.76	11	1.5	$1245.11	$201.42	16	17.5	$1172.85	$191.49
$191.16	28	1.5	$1449.86	$198.03	50	15.4	$1319.84	$191.28

t = 0.12; d.f. = 26; p = NS
t = 2.54; d.f. = 26; p = S*

t = 2.00; d.f. = 48; p = S*
t = 7.58; d.f. = 48; p = S*

wherein there is a five dollar difference between full-time and half-time students. This is probably explained by different patterns of tutor use and area of study expenses.

Area of Study

The next variable that affects the composition of a student body is the area of study or major chosen by the student. Feldman and Newcomb (1969) summarized 40 years of research on student differences by major field of study. This review of research reveals that different fields of study are pursued by students with certain background and personality characteristics. Furthermore, instructional costs vary considerably for students pursuing different fields of study (Meeth, 1974). Given these findings, it is important for colleges to maintain some balance among curricular areas and related costs within the overall educational program and budget. By knowing the distribution of students among areas of study or majors (and how many students change majors), a college can better control through admissions, orientation, and faculty advising, the number of students and appropriate costs to be found in a given area of study.

Empire State's educational program is different from the traditional college curriculum (i.e., contract learning system, interdisciplinary focus, etc.), and the demographic characteristics of ESC's student body (see ESC *Educational Program*, 1974) differ from most other student body profiles. The applicability of previous studies to ESC's unique setting was a question for exploration. Therefore, an initial hypothesis was that there would be important outcome differences among graduates by area of study, but the specific links between areas of study and outcome change would be different. To test out in a preliminary way the initial hypothesis, three relatively distinct areas

Figure 10
Summary of Outcome and Cost Findings for MCES Graduates by Area of Study

	Multiple Evaluation Techniques						
	Student Rating				Mentor Rating		
Area of Study	N	Mean Change	Avg. Experience Cost**	Avg. FTE Monthly Cost**	N	Mean Change	Avg. Experience Cost
The Arts	13	1.2	$1285.80	$205.10	13	2.1	$1373.10
Community & Human Services	14	3.0	$1389.24	$186.12	12	2.2	$1333.34
Business & Economics	16	2.1	$1242.91	$184.13	15	1.7	$1260.67
Total Cases	43	2.1	$1303.52	$190.65	40	2.0	$1319.01
Significance-Outcomes		F = 5.28; d.f. = 40,2; p = S*				F = 1.54; d.f. = 37,2; p = NS	
Significance-Costs		F = .006; d.f. = 40,2; p = NS				F = .33; d.f. = 37,2; p = NS	

*All relationships marked with an asterisk were statistically significant at the .05 level using the F test. The F tests on costs were calculated only for the average experience cost. S stands for significant, NS for not significant.

**Average experience cost includes all the costs incurred by the student in order to complete his/her degree. The average FTE monthly cost refers to all the costs incurred by a specific student divided by the months of credit received.

were investigated in the MCES — the arts; community and human services; and business and economics.

A summary of the outcome and cost findings for each area of study is presented in Figure 10. The basic finding is that there are significant differences among some of the outcome measures but essentially no statistically significant cost differences by area of study. For the student rating, graduates in community and human services scored the greatest outcome change and graduates in the arts the lowest. Although the differences in the content analysis scores were not statistically significant, they did show the business graduates scoring higher than graduates in the arts and in community and human services.

FINAL OBSERVATION

Educational researchers are not agreed on the "best" way to analyze data. The PERC multiple perspectives strategy requires that the mode of analysis be tailored to either a particular audience or decision maker or to varying audiences and decision makers. For example, the same set of data can be analyzed in terms of the effects on students, the effects on faculty, the effects on the college, the effects on the larger community, or some combination of these groupings. PERC has the capability of informing policy decisions from several perspectives depending on the policy questions at stake and the groups most interested in or affected by the decision. Chapter 5 illustrates how some of the Mini Cost Effectiveness Study data can be related to policy questions.

	Tutor Rating				Content Analysis			
Avg. FTE Monthly Cost	N	Mean Change	Avg. Experience Cost	Avg. FTE Monthly Cost	N	Mean Score	Avg. Experience Cost	Avg. FTE Monthly Cost
$199.44	9	1.4	$1457.63	$188.76	17	13.2	$1357.67	$201.58
$189.35	9	1.3	$1541.23	$194.00	16	15.4	$1370.73	$188.25
$185.39	10	1.8	$1360.60	$194.38	17	17.1	$1234.13	$184.04
$191.16	28	1.5	$1452.56	$192.73	50	15.4	$1319.84	$191.28

F = 0.59; d.f. = 25,2; p = NS

F = .30; d.f. = 25,2; p = NS

F = 1.87; d.f. = 47,2; p = NS

F = .56; d.f. = 47,2; p = NS

CHAPTER 5
DATA USE AND APPLICATION

All organizations face myriad decisions. Some decisions concern current, relatively straightforward matters whereas others shape or redirect the basic mission or fundamental character of the organization. Among the former types are day-to-day staffing, short-term budget control, and other important but moderate scale decisions. For example, a faculty member makes this type of decision when he/she hires a tutor to facilitate a student's learning. At a traditional college, a faculty member makes this type of decision when certain laboratory equipment is purchased to be used in freshman chemistry courses. The longer-range decisions include definition and redefinition of goals, allocation of resources, and determining academic commitments. The creation of an accessory instruction account for hiring tutors is an example at ESC. For other colleges, the decision to offer a new degree or add a new department may affect the basic academic commitments of the institution. Selznick (1957), labels the two types of decisions "routine" and "critical." Balderston (1974), recently drew further distinctions in looking at administrative decisions for colleges and universities. He discussed "procedural" decisions that involve a search for a system to deal with a class of problems, "substantive" decisions that involve a commitment of resources or power, and "constitutional" decisions that entail major adjustments in institutional mission. PERC is designed to assist on all three types of decisions by providing information on outcomes and costs. Such information needs to be presented in flexible formats which often involves presenting different kinds of data to several audiences: executive administration, faculty, students, program heads, middle level administrators, and others both inside and outside the institution.

The following sections illustrate a policy analysis framework. The area introduced in Chapter 4, student mix, is discussed in terms of possible policy implications. Again, we caution the reader that the findings presented are illustrative only and are based on a small student sample. The chapter concludes with a discussion of PERC reports and report formats.

POLICY IMPLICATIONS ON THE QUESTION OF STUDENT MIX

Data on student mix and some analyses were presented in Chapter 4. This section discusses ways of relating that information to policy decisions.

Each institution of higher learning can exert certain controls on the composition of its student body and the relative cost of certain educational programs. For example, controls on student body characteristics can be applied through a college's admissions policy. Academic policies and procedures can greatly affect the kinds of students attracted to the institution and the likelihood of those students completing their degrees successfully. In order to illustrate the effects of certain controls on student mix for admissions policies, student/faculty relationships, faculty work load, college record keeping, and budget planning, let us return to the arguments and data presented in Chapter 4.

The argument in favor of a high proportion of students enrolled full-time can be restated as follows: full-time students at ESC should be able to complete their degree programs in a short period of time (eight to twelve calendar months) and should be able to obtain the educational benefits of a more intense learning experience. If contract learning for some full-time students can build on and become integrated with the students' work or community experiences, the result may be peak learning experiences with substantial impacts on the individuals involved. Such concentrated learning should lead to greater outcome change whereas the costs for full-time and half-time enrollments would be the same.

From the student's point of view, completing a degree program in minimum time as a full-time student (assuming the maximum award of advanced standing) is especially attractive. Also, certain financial supports, such as the Tuition Assistance Program awards, are given only to full-time students. For a "six monther," then, to finish a degree means making certain personal adjustments at work and at home but the learning experiences would be intense, rewarding, and long lasting.

From the faculty member's point of view, working with a high proportion of full-time students compared to a high proportion of half-time students may lead to greater satisfactions in mentoring and to a more manageable work load. Faculty are expected to carry a certain FTE load to meet budgetary allocations set for the College but the mix of full-time and half-time students to fulfill the FTE load is left to the discretion of the College. Thus, faculty may prefer to work with full-time students since this means a smaller number of individuals to mentor than if a faculty FTE load contains 75 percent half-time students. Furthermore, working with full-time students eases the flow of paperwork as the number of degree programs, contracts and portfolios to be developed is less and more time is available for concentrating on the learning experiences of the student.

The proportion of full-time students in the College also has implications for daily operations of various administrative offices. For example, the more full-time students in the College, the closer the FTE enrollment approaches the head count enrollment which means that fewer applicants are needed to fulfill the stated enrollment targets and fewer students overall will be admitted. Thus, the energies and flow of paperwork are less than would be the case if half-time students were the predominant applicant. Another example concerns the amount of administrative coordination and record keeping required. A high proportion of half-time students means a larger number of enrolled individuals in the College, which in turn generates the same kind of documents in larger numbers, than full-time students do. All of the above arguments tend to support one another and lead to strong pressures on the College to enroll a high proportion of full-time students.

The data presented in Chapter 4 do not fully support these different arguments. To recapitulate the findings presented in Figure 9, there was no significant outcome difference among the various measures used but there was a significant cost difference between full-time and half-time students. In partial explanation of this finding, we found that full-time students took one and one-eighth months longer to complete their degree program than did half-time students. In addition, full-time students tended to use tutors more often and had an average tutor cost of $214 ($181 for half-time students).

If half-time students tend to derive equal and in some ways greater outcome benefits from the educational program (content analysis scores in Figure 9), then the College may need to reconsider the effects of enrollment status upon College operations. From a cost standpoint, the half-time student goes through the program on schedule more frequently than the full-time student and is less expensive. For the student, this fact means completing the program as planned originally and a direct savings in tuition costs when compared to the additional one and one-eighth months needed for the full-time student to complete a degree. For the faculty member, the full-time student may require additional meetings beyond the contract completion dates, changes in the degree program plan or possibly paperwork problems because of additional billing requirements. For the College, the half-time student may allow for a more effective and efficient use of resources and lessen certain overall coordination costs (i.e., registrar's office, billing and college records). For example, Empire State has a special Contract Outcomes Form which should be filed by the mentor for a student whose contract work is not completed within an appropriate time. The main point of this discussion is that half-time students compared to full-time students may learn as much, cost less, and have certain implications for college operations in a variety of different offices than initially expected.

The distribution of students across areas of study (majors in a traditional college) also has important ramifications on the educational program, on the hiring of faculty, on faculty work load and on program costs. Although the Mini Study examined only three of the nine areas of study in the College curriculum, there were variations among the three areas that can illustrate certain policy implications. To recapitulate the findings in Figure 10, outcome scores were generally related to experience costs in the student's area of study. The greater the outcome change, the greater the cost. For example, community and human service graduates had the highest outcome scores and highest experience costs, business graduates had medium outcome scores and the lowest experience costs, and arts graduates had the lowest outcome scores and medium costs.

From the student's viewpoint, the educational program seems to be meeting the needs of both community and human services and business graduates since they report substantial outcome change. This outcome change is also confirmed in the content analysis score, which represents a faculty evaluation of student learning. ESC has attracted a large number of students with a degree interest in these areas and has made a substantial commitment of learning resources to serve these students. If ESC seeks to expand its educational effectiveness, it may wish to serve increasing numbers of students in these areas (i.e., community and human services and business). The high experience costs of community and human services graduates would be in large part offset by the low experience costs of business graduates. Such a change in the student mix by area of study would have direct implications for the hiring of new or replacement faculty as more mentors would be needed in the community and business areas. Correspondingly, such a shift in student mix by area of study may reduce the number of arts students and their high FTE monthly cost. Arts students came to ESC with strong backgrounds and greater competencies on the outcomes rated. Further, the rating forms had a ceiling point so that there was not as much room to show growth among the arts graduates as for the graduates in the other two areas given their initial high ratings. Such a change in student mix does *not* mean reducing to zero the number of arts students (the traditional extension of the effectiveness/cost argument), because the College must, as a liberal arts institution, maintain a minimal level of learning opportunities in the arts field.

What is at stake here is a more conscious decision about the numbers of students in certain areas of study, for such conscious decision can lead to more systematic planning about staffing needs, faculty competencies, and overall program costs. But even well-planned academic, recruitment, and admission policies can be undermined if significant numbers of students change their areas of study and thus disturb the balance between student interests and faculty competence. In the future, the Student Biographical Inventory and the Student Experience Questionnaire will provide data about initial student choice of area of study and subsequent changes in interest that should be of help in institutional planning.

These two student mix variables (enrollment status and area of study) are subject to some influence by faculty and administration at the local center level. For example, orientation sessions and faculty advising of students could stress the benefits of half-time study over full-time or the selection of certain areas of study over others. These student mix controls are exerted once the student is enrolled at the College.

PERC places highest priority on data analyses that inform policy decisions. The student mix variables discussed above would affect admissions policies, student/faculty relationships, faculty work load, college record-keeping, administrative coordination and budget planning. This section has presented some policy implications of the data presented in Chapter 4. The next section describes the use and dissemination of information gained through research.

DATA USE AND DISSEMINATION ISSUES

This *Handbook* will not explore in depth the many strategic matters facing any institution considering PERC. Six data use and dissemination issues do, however, need some consideration here.

Increasing the Use of Data in Policy Deliberations

The initial part of Chapter 5 indicated our view that PERC should be oriented toward the major policy decisions facing the program or institution. But such an orientation does not assure that the data will be used. It is essential also to be certain that various people connected with the institution — faculty, students, administrators, perhaps members of the board — understand and anticipate PERC data. To facilitate this situation, we recommend that the research process involve a variety of people and groups at all stages: defining the research problems and the policy areas to examine, deciding on data-collection strategies and techniques, analysis and interpretation of findings, and use of data in policy-making.

At Empire State College, an institution wide advisory group — the Research Advisory Committee (RAC), including faculty, administrators, and students — counsels the Office of Research and Evaluation (ORE) on virtually every aspect of its operations. For example, RAC helps make general plans, design projects, develop schedules, revise research instruments, review reports, and disseminate results. It also provides a convenient source of information for faculty and others at centers about ORE activities. Informally, then, RAC functions as a collegewide extension of the research staff and in this capacity can solicit and answer questions and communicate ideas. Overall, the Research Advisory Committee has contributed significantly to the research effort at Empire State in making findings more meaningful, timely, and pertinent to the College.

Other groups whose ideas are regularly sought at Empire State are the Administrative Cabinet and the Administrative Council. The Administrative Cabinet consists of the president and the vice-presidents. The Office of Research and Evaluation has membership on and thus direct input to Cabinet deliberations. The Cabinet, a major policy advisory body at ESC, and its knowledge of and contributions to PERC activities are essential to the success of the research effort. This administrative body is the primary audience for ORE activities. To date a high percentage of specific research tasks have been generated by the Cabinet, which then uses the findings. The Administrative Council consists of the Cabinet members plus deans, directors, and other administrators. This group also generates and receives various reports, and its views shape activities.

In addition to the above sources of input and advice, ORE maintains liaison with the faculty Senate and long-range planning committees. The College has a President's Committee on College Development with primary responsibility for the coordination of study groups and task forces examining various planning issues at the College. This Committee has a major role in long-range planning and priority setting. At various times, ORE with PERC data provides useful and pertinent data for long-range planning processes.

Although widespread involvement by various administrative offices, Senate committees, and other groups is important to ORE work and to the development and utilization of PERC, it is essential that ORE maintain a working balance with these groups. All views must be considered in designing and implementing PERC; simultaneously, measures should be taken to develop some degree of independence from the pressures, demands, and necessities of line administrative activities. ORE responds to many and varied institutional requests with data obtained through the PERC research, while also presenting information and reports initiated by the research staff.

Defining Success

A natural outgrowth of having widespread involvement in PERC research will be many views of what constitutes program "success" or lack of it. The concept is old in postsecondary education in the sense of being discussed in institutional accreditation reports over the years. But at the same time the concept is very young in terms of the clarity with which it is used, measured, and applied in postsecondary education today. Great pressures now exist for colleges and universities to (once again) "prove" themselves. Key conceptual problems arise, however, in deciding on what constitutes "proof." The approach taken in PERC is a pluralistic one in that no single individual, group, or other source has "the answer" on standards, quality, or proof. *Each* interest may be important and thus may serve to judge program performance and success. For example, from a student's eyes, a program might be successful if it allows students to obtain certification with satisfactory effort. Faculty might, however, consider the same program successful only if it weeds out some students as "undeserving." Administrators might see program success in terms of costs per student. Thus, there are multiple perspectives on success.

Interinstitutional Comparison

At some stage, the question of comparability must be raised. This issue has been a key topic in higher education research for years, and pressures have led on occasion to highly questionable comparisons. Does PERC allow cross-institutional comparisons? Our view is that PERC can be used in this way but that its primary focus is to develop good and useful *intra*institutional data for all types of postsecondary programs. This is challenge enough for now. As time goes on and experience with PERC grows, a strong footing for interinstitutional comparisons will emerge. At present, interinstitutional studies must be done carefully because comparative data is not necessarily identical. Students, faculty, and programs exist in various sizes, shapes, structures, climates, and so on. Some definitions are nearly universal and transfer well: sex, age, SAT scores. Others, however, do not transfer well: student types, "full-time" faculty. As difficult as comparative research is, additional efforts will be made to find ways whereby PERC can speak to questions and issues concerned with cross-institutional comparisons.

Protecting Privacy

Confidentiality is a critical issue. Because of the longitudinal nature of PERC data collection, it is necessary that individual student identity be maintained. As designed, students participating in PERC receive three different questionnaires throughout their undergraduate work and at least one follow-up questionnaire some time after graduation. Information on confidentiality is printed in all questionnaires and research staff members respond to questions and comments on this subject.

In fall 1975, the Office of Research and Evaluation staff met with State University Legal Counsel to discuss the protection of individual privacy. Although this is a step that should be taken by anyone adapting PERC, we were told, in essense, that the disclaimers on the questionnaires will protect the student from anyone using individual data other than the research staff. If a student wishes to review his/her own responses as recorded, this is, of course, possible.

Adapting PERC

Throughout this *Handbook* we have offered suggestions on how to adapt PERC to local needs. Here, in summary, are the major elements of adapting PERC.

The way to start is with case-study techniques: interviews, observations, review of pertinent documents, and perhaps use of the rating forms. As a starting point, case-study techniques have several attractive features. First, they can focus on a small sample. This aspect makes them relatively unobtrusive. Second, they allow researchers to establish a track record, which can be useful in promoting later, more extensive efforts because people will have seen results. Third, and probably most important, case study techniques are fairly flexible in format, thus allowing the researcher to pay special attention to unexpected findings. Survey instruments can then be designed to deal in precise ways with these areas. A clear example of this is seen in the Faculty Questionnaire (FQ) where respondents are asked to agree or disagree with statements generated in an earlier interview study.

Among the survey instruments, the Student Biographical Inventory (SBI) and Program Completion Questionnaire (PCQ) have the highest priority because they provide entry and exit pictures. Local conditions will determine the priority of the other instruments. For example, dropouts are a serious fiscal concern in some institutions so the Attrition Questionnaire (AQ) may be of particular value to them.

Most institutions will want to modify parts or all of the ESC instruments. This adaptation often can be done easily and is encouraged as long as all five parts of the framework are adequately covered by the total design. Other factors affecting specific modification decisions should include: which outcomes are important to the institution, which can be measured by quantifiable techniques, what instruments will be packaged, and the like. In these decisions, again, we recommend widespread involvement. Overall, the strategy selected should meet the following four conditions:

Primary focus is on the outcome-cost relationship.
Outcomes are assessed by at least two observers.
Longitudinal measurements are taken.
Quantitative and qualitative data are used.

Providing Adequate Funding for PERC

PERC is seen as a conceptual framework for institutional and educational research at postsecondary education institutions. The data it provides will answer many Federal and State report requirements and furthermore, help institutions deal with important policy questions. Institutions interested in PERC should orient research work and assign research personnel accordingly. As such, PERC need not be expensive. In fact, two of the cooperating institutions have carried out over half of the options simply by reallocating parts of one or two existing staff member's time. Conversely, like any research, it can require many dollars to mount and implement. Such considerations should inform the early research strategy discussions.

PERC REPORTS: OPTIONAL FORMATS

The data display format, shown in Figures 9 and 10, utilizes a multiple research technique for linking outcomes-cost information as one way to present PERC data. Other ways of presenting data exist. In fact, at Empire State College, several reports have been prepared from data gathered by single instruments or techniques. Each PERC instrument and some reports that have been prepared using data from it are listed below.

The ESC Office of Research and Evaluation has five types of reports that it develops using PERC instruments (see Figure 11).

Bullets are short, targeted responses to institutional questions. They usually contain 1-2 tables and a few paragraphs explaining how the data relates to a particular institutional concern. A second type consists of *occasional papers* that relate to the PERC framework. *Research reports*, the third type, are larger than bullets and occasional papers, and discuss findings of identifiable studies. For example, an early research

Figure 11
PERC Report Types

Bullets

- primarily informational
- short, table and a few paragraphs
- restricted distribution
- targeted to particular questions
- single dimension

Occasional Papers

- single dimension
- up to 15 pages
- may have wide audience

Research Reports

- in depth reports on particular research questions
- often contain policy recommendations
- 15 pages and up, local audience

Monographs

- relate to broad policy questions
- wide audience
- often lengthy
- relate to literature base
- reviewed widely before distribution

Handbooks

- methodologically oriented
- wide audience
- may be related to literature base
- reviewed widely before distribution

report — *Success after Graduation* (Lehmann, 1974) — summarized findings of the first administration of the Graduate Follow-Up Questionnaire (GFQ). A fourth type of report is the *monograph*, which introduces general research theory and practice in an extensive discussion of educational issues. A recent monograph, *The Empire State College Mentor: An Emerging Role*, (Bradley, 1975), presented interview and questionnaire findings in the context of a national higher education movement toward individual education concepts. *Handbooks* such as this one are the fifth type of research report in the Series. This type of report is printed to facilitate use — common binder, wide margins, illustrations, references to alternate methods — and presents step-by-step procedures and techniques, including samples of questionnaires, interview schedules, rating forms, and the like, to analyze particular institutional policy matters.

Hard copy reports are not the only format for PERC data. If local conditions make it possible, it is also useful to have research staff members on various institutional bodies: administrative cabinet, senate, planning task forces, faculty committees, and the like. It is also productive for both when research staff meet with groups of faculty or administrators (e.g., a department) to exchange ideas on a given data set. Often, for such sessions, the presentation can be tailored to meet the particular needs of the faculty or administrative group. Figure 12 provides illustrations of the different report formats as related to PERC instruments.

FINAL OBSERVATIONS

PERC is a comprehensive framework for assessing the relationships between outcomes and costs. Developed at Empire State College, it is adaptable to any postsecondary setting providing the adapting program or institution uses multiple sources of data, multiple measures, and multiple evaluators in an examination of the linkages among the five parts of the framework: students, faculty, programs, outcomes, and costs. PERC suggests that analysis and presentation be organized using major policy analyses as the guides. Options are open to anyone adapting the framework at all stages.

Figure 12
PERC Instruments and Sample Research Reports

PERC Instrument	*Reports*
Entrance	
Student Biographical Inventory	New Models for Career Education: A Preliminary Evaluation
Standardized Tests	Research & Review #5: A Report on the ESC Testing Program; 10/30: Case Studies on the First Graduates
Student Interviews	New Models for Career Education: A Preliminary Evaluation
Student and Faculty Rating Forms	Mini Cost Effectiveness Study
College Files	Enrollment by Residence, Sex, Age, and Education Beyond High School
During Studies	
Student Experience Questionnaire	ESC Self-Study: New Models for Career Education: A Preliminary Evaluation; Educational Outcomes from Contract Learning; Implementing Contract Learning Innovation Process in Higher Education
Faculty Questionnaire	The Empire State College Mentor: An Emerging Role
Student Interviews	New Models for Career Education: A Preliminary Evaluation; The ESC Studio Arts Program; The North Country Unit
Faculty Interviews	The Empire State College Mentor: An Emerging Role
Content Analysis	Mini Cost Effectiveness Study
Observation	ESC Studio Arts Program; New Models for Career Education: A Preliminary Evaluation; The Empire State College Mentor: An Emerging Role
College Files	Faculty Characteristics; Personnel Characteristics

Figure 12 (continued)
PERC Instruments and Sample Research Reports

PERC Instrument	*Reports*
Exit	
Program Completion Questionnaire	New Models for Career Education Dissemination Program
Attrition Questionnaire	Attrition at a Nontraditional Institution
Student and Faculty Rating Forms	Mini Cost Effectiveness Study
Student Interviews	10/30: Case Studies of the First ESC Graduates; New Models for Career Education: A Preliminary Evaluation
Standardized Tests	Mini Cost Effectiveness Study
College Files	Attrition after Assessment; How Long to Graduate? Degrees of ESC Graduates
After Graduation	
Graduate Follow-Up Questionnaire	Success after Graduation
Costs	Mini Cost Effectiveness Study
External	Knowledge for What?; The BPS: Results of a Survey

GLOSSARY

adjunct faculty member - A person with special skills or knowledge who is retained by the College to work with students on a part-time basis.

assessment of prior learning, advanced standing and portfolio - Process by which the student's previous educational experience, both formal and informal, is judged for academic credit. Goals of the student and educational objectives of the College guide the judgment of the faculty committee. Advanced standing is the award (in months of academic credit) made by the College after evaluation of the portfolio. The portfolio is a document which describes the student's prior learning, documents and evaluates that learning and shows how such learning fulfills part of the degree program.

Bloom's taxonomy of educational objectives - The College educational objectives are patterned after the taxonomy of educational objectives developed by Bloom and others to help faculty in curriculum development, student learning and outcome evaluation.

CAMPUS-PMS - Comprehensive Analytical Methods for Planning in University and College Systems: Planning and Management Systems in Toronto, Canada has developed an elaborate cost model for educational institutions.

coordinating center - The administrative headquarters of Empire State College containing the Offices of President, Academic Affairs, Administration, and Research and Evaluation.

degree program - Individual program of the student, which includes prior learning and contract learning, with the appropriate mix of concentration and general learning; the governing planning document for the student's work at Empire State College.

chains of evidence - PERC develops quantitative and qualitative data that can be linked in examination of program effectiveness. Collectively this data forms chains of evidence.

degree program and portfolio process - The portfolio process assesses the student's previous educational experience, both formal and informal, is judged for academic credit. Goals of the student and educational objectives of the College guide the judgment of the faculty committee.

digest and evaluation (D & E) - A document prepared by a faculty mentor summarizes the activities of a learning contract and gives the mentor's evaluation. It is part of the official student transcript at Empire State College.

effectiveness - Goal achievement according to the multiple standards at the individual, program, or institutional level.

experience cost - Based on entire length of stay with College regardless of number of months or years. Computed by following a given student through a program and assigning costs according to type and time of learning activity use.

FTE monthly cost - All costs pertaining to a student's learning activities for one month of full-time study.

learning centers and units - Dispersed locations of Empire State College; centers hold many faculty mentors, units few.

learning contract - A document that describes a set of learning activities in which a student will engage over a given period of time for a given amount of credit. Means of evaluation and criteria also are stated on learning contracts at most institutions. Learning contracts are the building blocks of the degree program at Empire State College.

mentor - Faculty member of the College who works with the student in constructing a degree program; who counsels students in academic matters; who may provide direct instruction; who is responsible for marshalling appropriate resources necessary for the student to carry out the degree program, and who provides overall evaluation of the student's work.

Mini Cost Effectiveness Study (MCES) - A cross-sectional run-through of the PERC framework in 1974-75.

module - Special study guide prepared by and for Empire State College; an instructional resource particularly suited for contract mode of instruction at the College.

multiple audiences - Might include administrators, parents, accreditors, researchers, state officials, students, faculty, etc.

multiple methods - Might include questionnaires, observation, interviews, rating forms, standardized tests, content analysis, etc.

multiple observers - Might include students, faculty, administrators, outsiders, researchers, etc.

multiple perspectives strategy - A comprehensive term that includes multiple observers, methods, standards, and audiences.

multiple standards - Might include test norms, course objectives, course averages, prior students, "ideal" student, etc.

NCHEMS - The National Center for Higher Education Management Systems, in Boulder Colorado, has developed an elaborate cost model for colleges and universities and designed procedures and a computer system for analyzing cost data generated by the model.

outcome - An educational result of the interactions of students, faculty, and programs. PERC organizes individual student outcomes into eight classifications: substantive knowledge, communication skills, cognitive, developmental, personal, occupational, public service, unanticipated. Faculty and program outcomes are not yet categorized.

program - An identifiable organizational entity which has (or could have) goals and objectives. It may not have administrators or a budget but there must be a way to assign costs to it.

tutor - A person with particular skills or knowledge who is retained by the College to advise, instruct or evaluate a student or students on a particular occasion or occasions.

value-added - A term that designates the amount of positive change occurring between entrance to a program and measurement.

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COST ANALYSIS APPENDIX

Form CA I
Instructional Salaries

(Dollar figures, illustrative only)

1.	Number of Full-Time Mentors	50
2.	Total Full Time Salaries	$800,000
3.	Percent Time - Direct Instruction	65.8%
4.	Percent Time - Location Adm.	19.7%
5.	Percent Time - College Adm.	14.5%

Step 1

$800,000 (2) x 65.8 (3) = 526,400 Direct Inst. (6)
$800,000 (2) x 19.7 (4) = 157,600 Location Adm. (7) to Form CA IV
$800,000 (2) x 14.5 (5) = 116,000 College Adm. (8) to Form CA V

Step 2

526,400 (6) ÷ 50 (1) = 10,528 (9) Average direct Inst. M.S.

Step 3

Location	*Number Mentors Assigned*	x	*Average Salary*	=	*Location Total Mentor Salary (10)*
Long Island	15		10,528		$157,920
Metropolitan	13		10,528		136,864
(as many additional entries as necessary)					

Step 4. By Location

	L.I.L.C.	*G.V.L.C.*	*M.L.C.*	(as many additional entries as necessary)		
FT Mentors Sal. (10)	$157,920	$136,864				
PT Mentors Sal. (Actual)	12,000	8,000				
In-Kind Mentors Sal. (From CA II, III, V)	30,000	25,000				
Mentors Salaries (11)	$199,920	$169,864				

Step 5. For Comparison with Actual (Step 6)

Location	*Total Salaries (11)*	÷	*FTE Provision*	=	*Salary Per FTE*	÷ 12 =	*Monthly FTE Salary*
Long Island	$199,920		450		$444.27		$37.02
Metropolitan	169,864		390		435.55		36.30
(as many additional entries as necessary)							

Step 6. Allocation Within Location Based upon Actual Enrollment

Location	*Total Salaries (11)*	÷	*FTE Actual*	=	*Salary Per FTE*	÷ 12 =	*Actual Monthly FTE Salary*
Long Island	$199,920		456.52		$437.92		$36.49 (12)
Metropolitan	169,864		255.57		664.65		55.39 (12)

NOTES: Form CA I (Numbers relate to number on form).

1. Obtained from salary analysis or print out
2. Same as 1
3. Obtained from mentor questionnaire
4. Same as 3
5. Same as 3

Step 1.

Multiplication of total salary figure by percentages of time allocation obtained in 3, 4 and 5.

Step 2.

Calculation of average mentors instructional salary by dividing total M.I.S. (6) by number of full time mentors (1).

Step 3.

Assignment of mentors instructional salary to location by multiplying assigned mentors by the average M.I.S. salary (9).

Step 4.

Allocates total instructional salaries to each location by combining the amount for full-time average M.I.S. (10), the actual amount spent for part-time mentors employed by the location (obtained from the payroll records), and the amount expended by non-teaching personnel in teaching at specific locations (obtained from Form CA II).

Step 5.

This analysis takes the total amount expended on direct instructional activities and develops a monthly FTE instructional salary cost based upon the enrollment provided for. Purpose is to provide comparison between planned and actual (Step 6).

Step 6.

The actual monthly FTE instructional salary cost for entry on contract cost analysis is obtained by taking the total location cost (11) and dividing it by the actual FTE enrollment obtained from the Registrar.

Form CA II
Non Teaching Professional Salaries
(Dollar figures illustrative only)

(1) Name	(2) Salary	(3) *In-Kind Mentor*	(4) *College-Wide Administration*	(5) *Net Overhead*
Genesee Valley L.C.				
John Doe	$25,000	$2,450	$3,000	$19,550
Mary Jones	24,500	6,700	1,500	16,300
(as many names as necessary)				
	$79,400	$19,000 to CA I	$8,900 to CA V	$51,500 to CA IV
Repeat for Each Location				
Grand Total	$430,000	$67,500	$51,000	$311,500

NOTES: Form CA II (Numbers relate to number on form).

1 & 2. Names and salary amounts obtained from payroll records.

3. Number of FTE assigned obtained from Center record. Ideally, and some time in the near future, an actual tabulation of the hours spent in instructional activities will be available to form the basis of this distribution.

   Until this definitive record is available another method of calculation is necessary. The results of the mentors study indicates that the average hours spent each week by the average mentor is 56.8 with 65.8% of this time spent in instruction. This results in 37.37 hours per week. The expected FTE assignment is 30 FTE which produces 1.25 hours per week per FTE.

   Therefore, the formula will be:

   Salary ÷ 52 weeks = weekly salary ÷ 37.5 hours
   Expected workweek = hourly rate of pay ÷ actual
   number of FTE weeks (@ 1 ¼ hours per FTE) =
   Instructional cost. This figure will be transferred
   to CA I.

4. A tabulation of the actual meetings attended, including travel time, as well as time expended on task forces, preparing for meetings, etc.

   The hourly rate of pay for each individual will be multiplied by the number of hours devoted.

5. This figure, the net salary devoted to location administration will be transferred to form CA IV.

Form CA III
Unit Coordinators Salaries
(Dollar figures illustrative only)

(1) Name	(2) Salary	(3) Statewide Div. Adm.	(4) College-Wide Administration	(5) Unit Admin.	(6) Net Instruction
Plattsburgh:					
Oscar Pugh	$24,500	$4,200	$3,900	$8,000	$8,400
	$24,500	$4,200	$3,900	$8,000	$8,400
				to CA IV	to CA I
Repeat for each location					
Grand Total	$198,000	$31,500	$29,300	$53,000	$84,200
		to CA IV	to CA V		

NOTES: Form CA III (Numbers relate to number on form).

In most respects this form is similar to CA II, Non Teaching Professional Salaries. However, unit coordinators must be calculated separately because of the unique nature of their function in being primarily a mentor while assuming all local administrative functions as well as participating in State-Wide Division Administration as well as College-Wide Administration.

Therefore, the actual amount of time devoted to State-Wide Division, College-Wide and Unit Administration will be determined.

The salary of the individual will be reduced to an hourly rate based upon the 37.5 hours work week and the figures for 3, 4 and 5 will be determined by simple multiplication.

The net instructional cost (6) will be obtained by subtracting 3, 4 and 5 from 2.

The Unit Administration figure will be transferred to form CA IV, Location Overhead, on a unit basis. Instructional cost (6) will be entered on form CA I, instructional salaries on a unit basis.

The grand total of Statewide Division Administration (3) will be entered on form CA VI to enable a determination of total State-Wide Division Administrative costs to be charged back to location overhead on an FTE basis.

The College-Wide Administrative grand total will be transferred to form CA V, General Administrative Overhead.

Form CA IV
Location Overhead

Location	(1) *NTP Salaries*	(2) *Unit Coord.*	(3) *Non-Prof. Salaries*	(4) *Rent*	(5) *Plant Maint.*	(6) *Supplies*
Genesee Valley	$79,400		$39,000	$7,500	$3,000	$21,000
(as many locations as necessary)						
Total	$311,500	$53,000	$260,000	$52,000	$19,000	$100,000

Location	(7) *Equipment*	(8) *State-Wide Division Overhead*	(9) *Orientation*	(10) *Mentor Time*	(11) *Fringe Benefits*	(12) *Location Total*
Genesee Valley	$4,000		$750	$56,145	$33,724	$244,519
(as many locations as necessary)						
Total	$30,000		$7,500	$157,600	$152,510	$1,143,110

FTE/Month *Location*	(13) *Cost*		(14) *Planned FTE*		(15) *Planned Cost/FTE*		(16) *Planned FTE/Month*
		+		=		+ 12 =	
Genesee Valley	$244,519		$450		$544.07		$45.34

FTE/Month *Location*	(17) *Cost*		(18) *Actual FTE*		(19) *Actual Cost FTE*		(20) *Actual FTE/Month*
		+		=		+ 12 =	
Genesee Valley	$244,529		$441.32		$554.77		$46.23

NOTES: Form CA IV (Numbers refer to numbers on columns).

1. Entered from form CA II, Non Teaching Professional Salaries.
2. Entered from form CA III, Unit Coordinators Salaries.
3. Entered from CA VII, Non Professional Salaries.

4,5,6,7,9. Actual costs from accounting.

8. Figures for each location obtained from form CA VI.
10. Entered from CA I, Instructional Salaries.
11. Entered from CA IVA, Fringe benefit calculations.
12. Actual location overhead is total of Columns 1 - 10.
13. Cost obtained from Column 12.
14. Planned FTE is number of mentors times 30.
16. Planned FTE/Month Cost to be used for internal comparison with actual FTE/Month Cost (19).
17. Cost obtained from Column 11.
20. Amount to be ksed in allocating to contract costs.

Form CA IV A
Fringe Benefit Calculation
(For use with CA IV)

	GVLC	*LILC*		
NTP Salaries	$79,400			
Mentors Salaries	56,145			
Total	135,545			
x19.5%	26,431			
N.I. Salaries	39,000			
x 18.7	7,293			
Total F.B.	$33,724 to CA IV #10			

NOTE: Figure for Salaries obtained from CA IV. Percentage figure obtained from previously explained calculation.

Form CA V
General College Overhead

	President	*Exec. V.P.*	*V.P. Acad. Aff.*	*Res. & Evaluation*	*Business Officer*	*Total*
NTP Salaries						
N.I. Salaries						
Temporary Service						
Fringe Benefits						
Supplies						
Equipment						
Rent						
Other Oper. of Plant						
Computer Service						
Delivery & Mail						
Production						
Total						

Distribution

Total of totals is divided by planned FTE to arrive at a general overhead/planned FTE cost. Same calculation is completed using actual FTE for comparative purposes.

Form CA V
Distribution Continued

Location	*Planned FTE/Cost*	x	*Planned FTE*	=	*Location Cost*	÷	*Actual FTE*	=	*Actual FTE/Cost*	÷ 12 =	*FTE/Mo Cost*
Genesee Valley											
Long Island											
(as many as necessary)											

The FTE/Mo cost above will be used for allocation to contracts.

Form CA V A
Learning Resources Faculty

(1) *Name*	(2) *Salary*	(3) *In-Kind Mentor*	(4) *Module Development*	(5) *In-Kind Tutor*	(6) *Net College-Wide*
James Jones	$19,000	$1,200	$13,300	$ 500	$4,000
Mary James	16,500	900	7,500	1,200	6,900
(as many names as necessary)					
Total	$237,000	$21,500 to CA I	$165,900 to CA VII	$8,700	$40,900 to CA V

Form CA VI
State-Wide Division Overhead

	(1)	(2)	(3)	(4)
Coordinating Center:	*Salary*	*In-Kind Mentor*	*College-Wide Administration*	*Net State-Wide Division*
Professional Staff				
Jack Jones	$25,000	$3,000	$5,000	$17,000
(as many names as necessary)	22,000	5,000	4,000	13,000
Total	$47,000	$8,000 to CA I	$9,000 to CA V	$30,000

	(5)
Non-Professional Staff	$8,300
(as many names as necessary)	9,200
	6,500
	$24,000

Summary - other

Professional Staff Salaries (4)	$30,000
Non Professional Staff Salaries (5)	24,000
Unit Coordinators (CA III)	29,300
Supplies (Accounting Records)	8,000
Equipment (Accounting Records)	3,000
Rent (pro-rate sq. ft. cost of total rental)	1,500
Other Plant Cost (pro-rate cost)	1,100
	$96,900

Distribution

$96,900 ÷ 600 (Division Planned FTE) = $161.50 (Cost/Planned FTE)

$96,900 ÷ 550 (Actual Division FTE) = $176.18 (Cost/FTE)

Units	*Cost/Planned FTE*	x	*Planned FTE*	*Cost*
Plattsburgh (as many names as necessary)	161.50	x	67.5	$10,901.25

(Each Unit total in cost column is transferred to Column 8 on Form CA IV).

Form CA VII
Module Development

Learning Resources Faculty (Form CA V A)	$165,900
Accessory Instruction Fund	27,000
Production Costs	18,000
	$210,900

# Modules produced 32

Deferred Cost:

$210,900 ÷ 5 year useful life = $42,180 ÷ 32 = $1318.00 ÷ 500 production run = $2.64 each.

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APPENDIX

Dear Empire State College Student:

The Program Completion Questionnaire (PCQ) is the third part of the long term effectiveness study undertaken by the Office of Research and Evaluation at the College. The PCQ is designed to provide a picture of ESC students who have completed their degree programs at the College. The questionnaire covers selected background information, the mentor/student relationship, learning contracts, external supports, learning outcomes and future plans.

We think that the PCQ will help focus your thinking about your learning experiences at the College. It should take no longer than 15-30 minutes. When you have completed it, please mail the questionnaire to the Office of Research and Evaluation in the enclosed envelope.

Thank you for your help.

Sincerely,

Ernest G. Palola
Assistant Vice President
for Research & Evaluation
Empire State College
Saratoga Springs, N.Y. 12866

I. BACKGROUND

1. Name ______________________________
   Last First Middle

2. Social Security Number ___ ___ ___ - ___ ___ - ___ ___ ___ ___

3. Are you approved for graduation or a graduate of ESC?
   Yes ( ) No ( )

4. What was your Degree Program area of concentration at Empire State? (e.g., Cultural Studies, Science, Business)
   ____

5. How many hours per week are you presently being paid to work? (Mark one)
   - Does not apply (e.g., homemaker and/or student) ( )
   - Does not apply (e.g., unemployed, retired) ( )
   - 10 hours or less ( )
   - Between 11 and 20 hours ( )
   - 21 to 30 hours ( )
   - 31 to 40 hours ( )
   - Over 40 hours ( )

6. On the lines below, please indicate your primary occupation, and your spouse's. Please be as specific as possible, (e.g., Shop Foreman, Ford Plant; Housewife; Jr. High School Teacher; Retail Salesperson, "Sears" and other stores; President of Local Union, I.U.E.)
   a. Your primary occupation. (Check here if not applicable ( ))
   ____
   b. Your spouse's primary occupation. (Check here if not applicable ( ))
   ____

7. If you had specific learning objectives, did Empire State College provide you the opportunity to pursue them? (Check one)
   - No ( )
   - Yes, a little ( )
   - Yes, to a moderate extent ( )
   - Yes, to a great extent ( )
   - Yes, to a very great extent ( )
   - I never had specific objectives ( )

8. Have your educational objectives changed since entering ESC? How?
   a. Yes ( ) No ( )
   b. If yes, how?
   ____
   ____
   ____

II. MENTOR-STUDENT RELATIONSHIP

For the following questions, answer about the mentor or tutor with whom you worked most during your last ESC learning contract. Please indicate whether your responses to these questions refer to your mentor or tutor by checking one of the following:

( ) mentor ( ) tutor

(NOTE: The single term mentor will be used in place of mentor or tutor in the following items.)

9. Check the one statement that best describes how you and your mentor developed readings and activities for your last learning contract.
   a. My mentor almost always assigned most readings and/or learning activities for me. ( )
   b. My mentor generally assigned most readings and/or learning activities for me. ( )
   c. My mentor and I together developed a schedule of readings and/or learning activities. ( )
   d. I generally developed a schedule of most readings and/or learning activities. My mentor made few or no changes. ( )
   e. I almost always developed a schedule of most readings and/or learning activities. My mentor made few or no changes. ( )

10. During your last learning contract, how often did you meet with your mentor or talk to him by phone? (Count any contact no matter how short and check ONE response.)
    - Never ( )
    - Daily ( )
    - Twice a week ( )
    - Once a week ( )
    - Once every two weeks ( )
    - Once every three weeks ( )
    - Once a month ( )
    - Once every two months ( )
    - Other (please specify) ______________ ( )
    ____

11. Check the statement that best describes how you and your mentor relate during get-togethers in your last learning contract.
    a. When I ask a question, my mentor almost always presents his/her knowledge to me. ( )
    b. When I ask a question, my mentor generally presents his/her knowledge to me. ( )
    c. My mentor's style varies. Sometimes when I ask a question he/she presents knowledge and sometimes directs me to other sources so I can find out things by myself. ( )
    d. When I ask a question, my mentor generally directs me to other sources so I can find out things for myself. ( )
    e. When I ask a question, my mentor almost always directs me to other sources so I can find out things for myself. ( )

12. What was the normal length of your interactions with your mentor during the last learning contract?
    - ½ hour or less ( )
    - ½ hour to hour ( )
    - 1 - 2 hours ( )
    - more than 2 hours ( )

13. Here are some questions about different types of counsel sometimes offered by mentors: (Check one column for each item.)

	Never	Sometimes	Often	Very Often
a. Did you and your mentor ever talk about any personal problems you might have been having?	( )	( )	( )	( )
b. Did your mentor ever help you deal with ESC "red tape"?	( )	( )	( )	( )
c. Did you and your mentor ever discuss things related to your vocation such as future career plans, changing jobs, etc.?	( )	( )	( )	( )

14. Estimate the overall percentage of time spent with your mentor during the last learning contract on each of the following areas. Make sure the five estimates add up to 100%.
    a. Planning or revising your degree program (include portfolio development). ________%
    b. Developing the learning contract. ________%
    c. Discussing your readings, papers, and other activities on the learning contract. ________%
    d. Discussing other things (for example, ESC "red tape", vocational matters, chit chat, etc.). ________%
    e. Engaging in constructive appraisal of your contract work (e.g., papers, journal). ________%
    ____
    100%

15. Rate the relationship with your mentor during the last contract on the following characteristics.

	never	occasionally	frequently	almost always	undecided or not appropriate
a. My mentor challenged me to work at a level higher than I expected.	( )	( )	( )	( )	( )
b. My mentor often made me think through difficult questions rather than provide answers.	( )	( )	( )	( )	( )
c. My mentor clearly took into account my personal desires in planning my degree program.	( )	( )	( )	( )	( )
d. My mentor eased my anxieties when I worried about my contract work.	( )	( )	( )	( )	( )
e. My relationship with my mentor was productive.	( )	( )	( )	( )	( )
f. My relationship with my mentor was personally satisfying.	( )	( )	( )	( )	( )
g. My mentor let me have "lots of rope" to pursue my goals.	( )	( )	( )	( )	( )

16. On your last learning contract did your mentor provide serious constructive evaluation of your work?
no ( ) yes, but inadequate ( ) yes, adequate ( ) yes, more than adequate ( )

17. Overall, on the last learning contract, how do you feel about your relationship with the mentor? (Check the one that best applies.)
No feelings ( ) We did not work well together ( ) We worked fairly well together ( ) We worked well together ( ) We worked very well together ( )

III. LEARNING CONTRACTS

18.a. How easily did you adapt to the learning contract method of education?
easily ( ) some problems but overall not too many problems ( ) it was difficult ( ) it was very difficult ( )

b. Are there any reasons why? ______________________________

For ALL the learning contracts you have taken, answer the following questions.

19. How much time did you spend on the following mental activities? (for each activity, check the one response that best applies)

	Very Little	Some	A Great Deal	Almost All My Time	Uncertain
a. Memorizing - learning specific things, ideas, methods so that you can remember them pretty much in the same form in which you encountered them.	( )	( )	( )	( )	( )
b. Analyzing - breaking down an experience or theory into its basic elements (e.g., examining a particular case or situation in depth and mastering its content).	( )	( )	( )	( )	( )
c. Synthesizing - organizing ideas, information and experience into new relationships or frameworks. The ability to perceive patterns and parallels as well as discontinuities (e.g., in comparative studies, synthesis may be achieved across cultures, across time or from different disciplinary perspectives).	( )	( )	( )	( )	( )
d. Evaluating - making quantitative and qualitative judgments about the value of information, arguments, and methods (e.g., focusing on how others gather and interpret data and judging the soundness or utility of a body of work).	( )	( )	( )	( )	( )
e. Applying - using theories or concepts in practical activities or using them in new situations.	( )	( )	( )	( )	( )

20. Did you use any:

a. ESC learning modules
( ) no ( ) yes, please specify, and rate each used:

Module Title	useless	somewhat useful	generally useful	very useful
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )

b. SUNY Independent Study courses
( ) no ( ) yes, please specify, and rate each used:

Course Title	useless	somewhat useful	generally useful	very useful
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )

c. ESC Residential Workshops
( ) no ( ) yes, please specify, and rate each used:

Title & Place	useless	somewhat useful	generally useful	very useful
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )

d. Courses taken at other institutions
( ) no ( ) yes, please specify and rate each:

Title, Place, & Grade received	useless	somewhat useful	generally useful	very useful
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )
______________________________	( )	( )	( )	( )

21. Please check on the following list any other learning resources you have used in connection with your studies.

a. ESC group studies	( )	d. museums, art shows, etc.	( )	g. field research projects	( )	j. videotapes	( )
b. tutorial	( )	e. TV programs	( )	h. travel	( )	k. theater and/or concerts	( )
c. laboratories	( )	f. field trips	( )	i. movies	( )	l. on the job experiences	( )

22. Did the Digests and Evaluation of your learning contracts clearly reflect the activities you undertook?
never ( ) sometimes ( ) usually ( ) very often ( ) always ( )

Any comments? ____

____

IV. SUPPORTS

25. How many students at Empire State do you consider to be close friends? (Exclude those who were close friends prior to your enrollment.)

None ( ) 4-6 ( ) 10 or more students ( )
1-3 ( ) 7-9 ( )

26. Did you feel a need to meet with other ESC students?

Never ( ) Sometimes ( ) Often ( ) Very Often ( )

27. What sorts of problems have arisen during your ESC career?

a. none ( )
b. financial ( )
c. job interference ( )
d. personal problems ( )
e. studying took more time than expected ( )
f. "red tape" got me down ( )
g. general anxiety about studies ( )
h. other (please specify) ______________ ( )

____

28. If you had a problem with your Empire State College work, with whom did you discuss it besides your mentor? (Check all appropriate responses.)

a. no particular problems ( )
b. your spouse ( )
c. your employer ( )
d. another Empire State College student ( )
e. a close personal friend ( )
f. your family ( )
g. your parents ( )
h. no one ( )
i. other (please specify) ( )

____

29. Did you make certain adjustments with the people below as a result of being an ESC student (e.g. working full time and taking a full time contract)? (Check all appropriate responses.)

a. Adjustments required with your employer ( )
b. Adjustments required with your spouse ( )
c. Adjustments required with your family ( )
d. Adjustments required with your parents ( )
e. Adjustments required with your friends ( )
f. Adjustments required with others ______________ ( )
g. No adjustments required (Please explain) ______________ ( )

____

V. OUTCOMES

30. Listed below are areas of intellectual competence of particular concern to some students. Indicate where you think you are now in relation to other people your age on the left hand scale. On the right hand scale indicate to what extent, if any, the ESC experience helped you improve in each of the following areas. For more complete descriptions of these areas, see the section on College Objectives in your Empire State Catalogue.

Where you are in relation to others your age					Areas of Intellectual Competence	To what extent ESC experience helped you improve				
Highest 10%	Above Aver.	Aver.	Below Aver.	Lowest 10%		None	A Little	A Moderate Amount	A Great Deal	A Very Great Deal
( )	( )	( )	( )	( )	a. Communication skills (to write and speak clearly, correctly and effectively)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	b. Knowledge (of information, theories, generalizations, methods of inquiry, and criteria for judgement)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	c. Comprehension of knowledge (thus allowing personal interpretations)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	d. Ability to analyze, (to break down an experience into basic elements)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	e. Ability to evaluate, (to make qualitative and quantitative judgements about the value of information, materials and methods)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	f. Ability to synthesize, (to arrange and combine elements so that new patterns appear)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	g. Ability to apply, (to use theory in practical activities)	( )	( )	( )	( )	( )

31. Listed below are areas of personal development of particular concern to some students. Indicate where you think you are now in relation to other people your age on the left hand scale. On the right hand scale indicate to what extent, if any, the ESC experience helped you improve in each of the areas. For more complete descriptions of these areas, see the section on College Objectives in your Empire State Catalogue.

Where you are in relation to others your age					Areas of Personal Development	To what extent ESC experience helped you improve				
Highest 10%	Above Aver.	Aver.	Below Aver.	Lowest 10%		None	A Little	A Moderate Amount	A Great Deal	A Very Great Deal
( )	( )	( )	( )	( )	a. Interpersonal competence (the ability to interpret the intentions and attitudes of others and to improvise appropriate responses)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	b. Awareness (openness to new ideas and experiences, sensitivity to social conditions and cultures)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	c. Clarifying purposes (concerns vocational interests, non-vocational interests, and general life-style considerations)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	d. Self-reliance (the capacity to act independently)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	e. Self-understanding (the process of self-examination and discovery of personal motives, strengths, and weaknesses)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	f. Understanding of others (the capacity to move beyond relationships of simple understanding to those where there are sympathetic responses to diverse kinds of persons and their conditions)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	g. Self-consistency (the clarification of attitudes and values so that words and actions are in harmony)	( )	( )	( )	( )	( )

32. Rate yourself on each of the following traits when compared with the average person of your own age. We are interested in estimates of how you see yourself.

Trait	Lowest 10%	Below Average	Average	Above Average	Highest 10%
a. Ability to handle stress	( )	( )	( )	( )	( )
b. Academic ability	( )	( )	( )	( )	( )
c. Athletic ability	( )	( )	( )	( )	( )
d. Artistic ability	( )	( )	( )	( )	( )
e. Cheerfulness	( )	( )	( )	( )	( )
f. Drive to achieve	( )	( )	( )	( )	( )
g. Idealism	( )	( )	( )	( )	( )
h. Impulsiveness	( )	( )	( )	( )	( )
i. Independence	( )	( )	( )	( )	( )
j. Leadership ability	( )	( )	( )	( )	( )
k. Mathematical ability	( )	( )	( )	( )	( )
l. Mechanical ability	( )	( )	( )	( )	( )
m. Optimism	( )	( )	( )	( )	( )

Trait	Lowest 10%	Below Average	Average	Above Average	Highest 10%
n. Originality	( )	( )	( )	( )	( )
o. Personal Organization	( )	( )	( )	( )	( )
p. Persistence	( )	( )	( )	( )	( )
q. Popularity	( )	( )	( )	( )	( )
r. Public speaking ability	( )	( )	( )	( )	( )
s. Reading ability	( )	( )	( )	( )	( )
t. Resourcefulness	( )	( )	( )	( )	( )
u. Self-confidence (intellectual)	( )	( )	( )	( )	( )
v. Self-confidence (social)	( )	( )	( )	( )	( )
w. Sensitivity to criticism	( )	( )	( )	( )	( )
x. Stubbornness	( )	( )	( )	( )	( )
y. Tolerance	( )	( )	( )	( )	( )
z. Writing ability	( )	( )	( )	( )	( )
Sense of humor	( )	( )	( )	( )	( )

33. Below is a general list of things that people sometimes do. In the past year, how many times have you in your leisure time:

	Never 0	Rarely 1-2	Sometimes 3-9	Often 10+
a. read some poetry	( )	( )	( )	( )
b. read a practical journal (e.g., Ladies Home Journal, Popular Mechanics) or a book	( )	( )	( )	( )
c. read articles in intellectually-oriented magazines or professional journals (e.g., The Atlantic Monthly, Commonweal, Science, Harpers)	( )	( )	( )	( )
d. read the editorial column of a newspaper	( )	( )	( )	( )
e. read a mystery, novel, or similar kind of "escape" book	( )	( )	( )	( )
f. read accounts of contemporary events in a magazine (e.g., Newsweek, Time, US News & World Report)	( )	( )	( )	( )
g. read a book on social science (e.g., history, psychology, sociology, geography, economics, political science, education)	( )	( )	( )	( )
h. read a book in arts and humanities (e.g., music, art, drama, literature, philosophy, religion, a foreign language)	( )	( )	( )	( )
i. attended a scientific lecture	( )	( )	( )	( )
j. visited a scientific exhibit	( )	( )	( )	( )
k. attended a stage play, movie, or concert	( )	( )	( )	( )
l. attended a lecture on a current social, economic, or political problem	( )	( )	( )	( )
m. attended a sports event	( )	( )	( )	( )
n. visited an art exhibit	( )	( )	( )	( )
o. tried some sketching, drawing, painting, sculpture, etc.	( )	( )	( )	( )
p. explained or illustrated a scientific principle to someone	( )	( )	( )	( )
q. watched a sports event on TV	( )	( )	( )	( )
r. attempted to invent something or to solve a mathematical puzzle	( )	( )	( )	( )
s. attempted to fix a complicated piece of machinery (e.g., auto, sewing machine, TV)	( )	( )	( )	( )

34. At Empire State College, how important is it that you achieve the following general objectives?

(Mark one answer for each reason)

	Not Important	Somewhat Important	Very Important
a. Increase my appreciation of art, music, literature, and other cultural expressions	( )	( )	( )
b. Discover my vocational interests	( )	( )	( )
c. Develop a new career	( )	( )	( )
d. Attain specific skills that will be useful on a job	( )	( )	( )
e. Meet the academic requirements necessary to enter a profession or graduate school	( )	( )	( )
f. Become involved in social and political concerns	( )	( )	( )
g. Increase my awareness of different philosophies, cultures and ways of life	( )	( )	( )
h. Improve my chances of making more money	( )	( )	( )
i. Learn how to participate effectively as a citizen in my community	( )	( )	( )
j. Develop an understanding and an appreciation of science and technology	( )	( )	( )
k. Improve my self image	( )	( )	( )
l. Simply learn	( )	( )	( )
m. Improve my professional status	( )	( )	( )
n. Increase my desire and ability to undertake self-directed learning	( )	( )	( )
o. A degree is required for my present or future job	( )	( )	( )

IV. SUPPORTS

35. Listed below are some work values that may be important to your present or future job. Please check the degree of importance these values have for you.

Work Value	Not Important	Somewhat Important	Very Important
a. Opportunities for advancement	( )	( )	( )
b. Stable and secure future	( )	( )	( )
c. Variety in work assignments	( )	( )	( )
d. Develop personal friendships with coworkers	( )	( )	( )
e. Avoid high pressure situations	( )	( )	( )
f. Independence (extent to which I can work on my own)	( )	( )	( )
g. Family and work responsibilities are of equal value	( )	( )	( )
h. Chance to exercise leadership	( )	( )	( )
i. Achieve a high income	( )	( )	( )
j. Desire to make a contribution to knowledge	( )	( )	( )
k. Obtain increased prestige and social status	( )	( )	( )
l. Opportunity to travel	( )	( )	( )
m. Other (please specify) ________________	( )	( )	( )

36. If you are planning to continue your education at a graduate or professional school, how important to you is each of the following reasons? (Mark one answer for each reason). ☐ Check here if you are not planning on graduate school and omit the question.

Reasons for Attending Graduate/Professional School	Not Important	Somewhat Important	Very Important
a. Desired vocational field required an advanced degree	( )	( )	( )
b. Improve chances of receiving a good salary, promotions, etc.	( )	( )	( )
c. Parents' encouragement	( )	( )	( )
d. Spouses' encouragement	( )	( )	( )
e. Encouragement of ESC faculty, administrators, or staff	( )	( )	( )
f. Unable to find satisfactory employment	( )	( )	( )
g. There is a graduate school close to my home	( )	( )	( )
h. Interest in learning more about my field	( )	( )	( )
i. Offer of financial assistance	( )	( )	( )
j. High caliber of program offered in my field	( )	( )	( )
k. Other (please specify) ________________	( )	( )	( )

37. What is the highest academic degree that you intend to complete? (Mark one)

None ( )
No degree beyond the Associate ( )
No degree beyond the Baccalaureate ( )
Doctorate degree (PhD, EdD, DBA, etc.) ( )
Professional degree (medicine, law, theology, etc.) ( )
Other (please specify) ________________ ( )

Office of Research and Evaluation

Dear Empire State College Student:

Empire State is a nontraditional College founded in 1971 with four mandates: to serve a different student clientele from the existing institutions of New York, to provide alternative forms of instruction, to provide quality education, and to do all this for less cost. ESC's responses to these mandates include a statewide "campus," use of individualized learning contracts rather than classes, and procedures for granting credit on the basis of prior school and non-school learning. There is widespread interest in these efforts throughout New York State and the nation. This questionnaire, the Student Biographical Inventory (S.B.I.), is an important part of the College's reply to this interest.

The S.B.I. is designed to provide a picture of the students attending ESC, their reasons for coming here, and their goals. It is the first link in a long-term effectiveness study conducted by the College Office of Research and Evaluation and supported by a grant from the United States Department of Health, Education, and Welfare. Our design calls for follow-up questionnaires and interviews with some of you at three other points: sometime during your studies, at graduation, and a year or two later. The aim of this research is to uncover what kinds of students change in what kinds of ways following what kinds of experiences and at what costs. S.B.I. results will help ESC improve current programs and make better-informed planning decisions as well as help other states determine whether they should undertake development of similar institutions.

We encourage and solicit your assistance on this research instrument. Note that this S.B.I. is **not** a test. The only "right" answers are those which reflect your own perceptions, judgments, and opinions. If for some reason you do not wish to answer a particular question, it is your option. This is a **voluntary** questionnaire. However, be assured that **your responses will be held in the strictest professional confidence.** That is, an individual's response will be available to the Research staff only and under **no** circumstances will individual responses be reported to anyone. We ask for identifying information to allow the Office of Research and Evaluation to conduct the various follow-ups mentioned above.

The S.B.I. includes questions seen as sensitive by some people. For example, we ask about such things as your race, ethnic orientation, financing, and parents' occupations. These questions were chosen because they are areas in which ESC students may be similar to or different from students at traditional institutions. Since Empire is mandated by the State of New York to serve students not generally served by traditional modes of higher education, this is vital information for a study of institutional effectiveness.

The Office of Research and Evaluation will prepare various reports using aggregate information obtained from the S.B.I. If you would like copies, please send the enclosed postcard. Also, if you want an explanation of the rationale behind any item on the S.B.I., please contact the Office of Research and Evaluation.

We think that the S.B.I. will help focus your thinking about educational goals and about Empire. It should take no longer than 15-30 minutes. When you have completed it, please mail the questionnaire to the Office of Research and Evaluation in the enclosed envelope.

Thank you for your help.

Sincerely,

Ernest G. Palola
Assistant Vice President
for Research & Evaluation
Empire State College
Saratoga Springs, N.Y. 12866

I. GENERAL INFORMATION

The following questions ask for background information about where you have lived, your occupational interests and the community where you grew up. Mark the appropriate answer as indicated in the question.

1. Name ______________________________
Last First Middle

2. Social Security Number ___ ___ ___ - ___ ___ - ___ ___ ___ ___

3. Your Empire State College Center or Unit? ____________

4. Your Sex: Male ( ) Female ( )

5. Year of Birth ____________

6.a. Marital Status: (Mark one) Married ( ) Not married ( )
b. How many children do you have? ________
c. How many dependents live with you (include spouse)? ________

7. Have you ever served on active duty in the United States Armed Forces?
Yes, am serving now ( ) No ( )
Yes, but not serving now ( )

8. How many years in total have you resided in New York State? (Mark one)
Never ( ) 6-10 years ( )
Less than 1 year ( ) 11 or more years ( )
1-5 years ( )

9. How many years have you resided at your present address? (Mark one)
Less than 1 year ( ) 6-10 years ( )
1-5 years ( ) 11 or more years ( )

10. How many states have you resided in (include N.Y.)? ____________

11. How many countries have you resided in (include U.S.)? ____________

If you did not live with your natural parents, answer the next two questions about the parents or guardians who most influenced your life.

12.a. What is the highest level of formal education obtained by your parents and spouse? (Mark appropriate level for each parent and spouse)

	Father	Mother	Spouse
Grammar school or less	( )	( )	( )
Some high school	( )	( )	( )
Finished high school	( )	( )	( )
Some college (less than A.A. or equivalent)	( )	( )	( )
Associate degree (A.A. or equivalent)	( )	( )	( )
College degree (B.A., B.S., etc.)	( )	( )	( )
Some graduate or professional training	( )	( )	( )
Graduate or professional degree	( )	( )	( )
Does not apply	( )	( )	( )
b. In addition, did they			
Attend Trade School	( )	( )	( )
Graduate from Trade School	( )	( )	( )

13. On the lines below, please indicate **your** primary occupation, your **spouse's**, your **father's**, and that of your **mother**. Please be as specific as possible. (e.g., Shop Foreman, Ford Plant; Housewife; Jr. High School Teacher; Retail Salesperson, "Sears" and other stores; President of Local Union, I.U.E.)

a. **Your** primary occupation
____

b. Your **spouse's** primary occupation
____

c. Your **father's** primary lifetime occupation
____

d. Your **mother's** primary lifetime occupation
____

14. Please indicate on the line below if you have held a second job in the past year and what it was. ( ) (Check here if not applicable)
____

15. If employed, how many hours per week do you work? (Mark one)
Does not apply (e.g., housewife, unemployed) ( ) 21 to 30 hours ( )
10 hours or less ( ) 31 to 40 hours ( )
Between 11 and 20 hours ( ) Over 40 hours ( )

In order for ESC to comply with US Office of Education data requirements on race, color, and national origin of its students; we request that you respond to the following question.

16. Are you (please mark the one that best applies):

White/Caucasian-American	( )	Oriental-American	( )
Black/Negro/Afro-American	( )	Mexican-American/Chicano	( )
American Indian	( )	Puerto Rican-American	( )

Other (e.g., foreign student) ______________________

17.a. Do you feel a strong identification with any ethnic group (e.g., Italian)?
Yes ( ) No ( )

b. If yes, please specify ______________________

18. Which best describes the community that you thought of as your hometown when you were in secondary school? (Mark one)

Farm or open country	( )	Medium-sized city (100,000 - 500,000)	( )
Town (under 10,000)	( )		
Small city (10,000 - 100,000)	( )	Large city (500,000 or more)	( )

19. Please list all voluntary programs or civic organizations in which you have participated in the past five years (e.g., Fire Dept., Church activity or Auxiliary groups, School Board, Little League).

Program or Organization	If you held an office, please name it below:

II. PREVIOUS EDUCATION

The following questions deal with previous accomplishments that apply to your high school and college experiences.

20. From what kind of secondary school did you graduate? (Mark one)

Public high school	( )	Private military academy	( )
Private (nonreligious, nonmilitary)	( )	Did not graduate	( )
Church-related	( )		

Other (please specify) ______________________

21. Where did you rank academically in your high school graduation class? (Mark the one that best applies)

Top 10 percent	( )	Bottom half	( )
Top quarter	( )	Don't remember	( )
Top half	( )		

22. How hard did you study in high school? (Mark one)
I studied very little, less than average ( )
I studied about the same as most students ( )
I studied hard, more than average ( )
I studied very hard, much more than average ( )

23.a. Is this the first time that you have enrolled in any educational institution beyond high school?
Yes ( ) No ( )

b. If no, please list previous institution(s) and reasons for leaving.

Institutions and Cities	Reasons for Leaving

24.a. Have you ever attended a proprietary institution (e.g., barber school, business school, secretarial school, mortician school, etc.)?
Yes ( ) No ( )

b. If yes, please list institutions, cities, type of school, and whether you finished.

Institution(s) and Cities	Type of School	If you finished, please check
		( )
		( )
		( )

25. Have you ever taken in-service training courses in connection with your job (e.g., at General Electric, Civil Service course, etc.)?
No ( )
Yes ( ) If yes, please describe briefly.
____
____
____

26. When did you last study for credit at a high school, college, or other recognized institution (e.g., trade school, correspondence school)? (Mark one)

Does not apply	( )	Between 6-10 years	( )
Within past year	( )	Between 11-20 years	( )
Between 1-5 years	( )	20 years or more	( )

27. Are there any other learning experiences that you consider to be highly significant (e.g., Peace Corps, extraordinary travel, etc.)?
____
____
____
____

III. EXTERNAL SUPPORTS

The following questions concern your ability to finance a college education, and people supports.

28. Do you have any concern about your ability to finance your college education? (Mark one)
I am confident that I will have sufficient funds without any financial aid. ( )
I will probably have enough funds without any financial aid. ( )
I will probably have enough funds but may need some financial aid. ( )
I will be able to complete college only with financial aid. ( )
I am not sure I will be able to finish college even with much financial aid. ( )

29. Sources of financing:
(please answer all items)

	Major	Minor	Not a Source
a. Full and/or Part-time work	( )	( )	( )
b. Savings	( )	( )	( )
c. Parental aid	( )	( )	( )
d. Employer support	( )	( )	( )
e. Aid from spouse	( )	( )	( )
f. Grants	( )	( )	( )

30. What was your total income last year independent of your parents? Consider annual income from all sources before taxes. (If married, include spouse's income.) (Mark one)

None	( )	$10,001 - $15,000	( )
Less than $1,000	( )	$15,001 - $20,000	( )
$1,001 - $4,000	( )	$20,001 - $30,000	( )
$4,001 - $7,000	( )	$30,001 +	( )
$7,001 -$10,000	( )		

31. Given your other responsibilities (job, marriage, family, etc.), how difficult do you think it will be for you to "keep up" at Empire?
I can do what I have to do rather **easily.** ( )
Going to ESC, under current circumstances, will require **some** effort. ( )
Going to school, under current circumstances, will require a **very substantial** effort. ( )
I am concerned that I **may not** be able to do all the things planned. ( )

32. How do your family, friends, and employer feel about your enrolling at ESC?

	Family	Friends	Employer
Strongly encouraging	( )	( )	( )
Somewhat encouraging	( )	( )	( )
Neutral	( )	( )	( )

33. To how many colleges other than Empire State College did you apply this year and at how many were you accepted?

Applied ________ **Accepted** ________

34.a. What is the single most important reason that you have never before obtained the degree you now seek?

____

b. Were there any other important reasons?

____

____

35. How many miles from your residence is the ESC unit with which you will affiliate? (Mark one)

2 or less	( )	11 - 25	( )	51 - 100	( )
3 - 10	( )	26 - 50	( )	101 - 200	( )
				more than 200	( )

36. How did you find out about Empire State College? (Check as many as are applicable)

a. From an Empire State College student	( )
b. From an Empire State College staff member	( )
c. From advertisements or an article in the media (newspaper, TV, radio)	( )
d. From a staff member of another institution	( )
e. From reading an ESC bulletin	( )
f. From a high school or college counselor	( )
g. From my employer	( )
h. From a friend or family member	( )

i. Other (please specify) ____________________

38. In terms of your personal life (e.g., leisure time with family and friends) how much do you think you will have to give up in order to find time for ESC studies?

A great deal ( ) **Some** ( ) **Very little** ( )

39. **In deciding to enroll at Empire State College, how important to you was each of the following reasons?** (Mark one answer for each reason) **Also, circle the letter of the item that is most important to you.**

	Not Important	Somewhat Important	Very Important
a. The possibility of receiving credit for prior informal learning experiences.	( )	( )	( )
b. The good reputation of Empire State College.	( )	( )	( )
c. I have friends at Empire State College.	( )	( )	( )
d. The low tuition of Empire State College.	( )	( )	( )
e. A previous Empire State College student recommended the College.	( )	( )	( )
f. The special programs offered by Empire State College.	( )	( )	( )
g. The independence allowed by Empire State College.	( )	( )	( )
h. My boss suggested that I go to Empire State College.	( )	( )	( )
i. I can work as well as study at Empire State College.	( )	( )	( )
j. A counselor recommended Empire State College.	( )	( )	( )
k. My parents wanted me to go.	( )	( )	( )
l. My spouse wanted me to go.	( )	( )	( )
m. I wanted to live at home while attending college.	( )	( )	( )
n. The chance to obtain a degree quickly.	( )	( )	( )

o. Other (please specify) ____________________

V. HOW DO YOU VIEW YOURSELF?

The following questions ask you about your activities and to appraise yourself.

40. Below is a general list of things that people sometimes do. In the past year, how many times have you in your leisure:

	Never 0	Rarely 1-3	Sometimes 4-9	Often 10+
a. read some poetry	( )	( )	( )	( )
b. read a practical book or journal (e.g., Ladies Home Journal, Popular Mechanics)	( )	( )	( )	( )
c. read articles in intellectually-oriented magazines or professional journals (e.g., The Atlantic Monthly, Commonweal, Science, Harpers)	( )	( )	( )	( )
d. read the editorial column of a newspaper	( )	( )	( )	( )
e. read a mystery, spy novel, or similar kind of "escape" book	( )	( )	( )	( )
f. read accounts of contempory events in a magazine (e.g., Newsweek, Time, US News & World Report)	( )	( )	( )	( )
g. read a book on social science (e.g., history, psychology, sociology, geography, economics, political science, education)	( )	( )	( )	( )
h. read a book in arts and humanities (e.g., music, art, dance, literature, philosophy, religion, a foreign language)	( )	( )	( )	( )
i. discussed the merits of political/economic system (e.g., communism, socialism, capitalism, etc.)	( )	( )	( )	( )
j. discussed world or national problems	( )	( )	( )	( )
k. discussed social issues with friends (e.g., civil rights)	( )	( )	( )	( )
l. discussed a scientific theory or event (e.g., open heart surgery)	( )	( )	( )	( )
m. discussed art or music	( )	( )	( )	( )
n. discussed philosophy or religion	( )	( )	( )	( )

(con'td.)

(40 con'td.)

	Never 0	Rarely 1-3	Sometimes 4-9	Often 10+
o. discussed plays, novels, or poetry	( )	( )	( )	( )
p. discussed a movie	( )	( )	( )	( )
q. discussed a sports event	( )	( )	( )	( )
r. discussed recipes, home decorating, etc.	( )	( )	( )	( )
s. attended a scientific lecture	( )	( )	( )	( )
t. visited a scientific exhibit	( )	( )	( )	( )
u. took tours of factories, businesses, etc.	( )	( )	( )	( )
v. observed governmental agencies (e.g., FBI, US Mint)	( )	( )	( )	( )
w. attended a stage play	( )	( )	( )	( )
x. attended a movie	( )	( )	( )	( )
y. attended a lecture on a current social, economic or political problem	( )	( )	( )	( )
z. attended a music recital or concert	( )	( )	( )	( )
aa. attended a sports event	( )	( )	( )	( )
bb. visited an art exhibit	( )	( )	( )	( )
cc. visited a library	( )	( )	( )	( )
dd. tried some sketching, drawing, painting, sculpture, etc.	( )	( )	( )	( )
ee. watched TV news specials (e.g., Watergate) or documentaries (e.g., "Inside the Bamboo Curtain: Red China Today")	( )	( )	( )	( )
ff. explained or illustrated a scientific principle to someone	( )	( )	( )	( )
gg. watched a sports event on TV	( )	( )	( )	( )
hh. attempted to invent something or to solve a mathematical puzzle	( )	( )	( )	( )
ii. attempted to fix a complicated piece of machinery (e.g., auto, sewing machine, TV)	( )	( )	( )	( )

41. Rate yourself on each of the following traits when compared with the average person of your own age. We are interested in estimates of how you see yourself.

Trait	Lowest 10%	Below Average	Average	Above Average	Highest 10%
a. Ability to handle stress	( )	( )	( )	( )	( )
b. Academic ability	( )	( )	( )	( )	( )
c. Athletic ability	( )	( )	( )	( )	( )
d. Artistic ability	( )	( )	( )	( )	( )
e. Cheerfulness	( )	( )	( )	( )	( )
f. Drive to achieve	( )	( )	( )	( )	( )
g. Idealism	( )	( )	( )	( )	( )
h. Impulsiveness	( )	( )	( )	( )	( )
i. Independence	( )	( )	( )	( )	( )
j. Leadership ability	( )	( )	( )	( )	( )
k. Mathematical ability	( )	( )	( )	( )	( )
l. Mechanical ability	( )	( )	( )	( )	( )
m. Optimism	( )	( )	( )	( )	( )

(con'td.)

(41 con'td.)

Trait	Lowest 10%	Below Average	Average	Above Average	Highest 10%
n. Originality	( )	( )	( )	( )	( )
o. Personal Organization	( )	( )	( )	( )	( )
p. Persistence	( )	( )	( )	( )	( )
q. Popularity	( )	( )	( )	( )	( )
r. Public speaking ability	( )	( )	( )	( )	( )
s. Reading ability	( )	( )	( )	( )	( )
t. Resourcefulness	( )	( )	( )	( )	( )
u. Self-confidence (intellectual)	( )	( )	( )	( )	( )
v. Self-confidence (social)	( )	( )	( )	( )	( )
w. Sensitivity to criticism	( )	( )	( )	( )	( )
x. Stubbornness	( )	( )	( )	( )	( )
y. Tolerance	( )	( )	( )	( )	( )
z. Writing ability	( )	( )	( )	( )	( )

VI. PERSONAL GOALS The following questions concern your future academic goals and your assessment of selected skills and abilities.

42. At Empire State College, how important is it that you achieve the following general objectives? (Mark one answer for each reason) Also, circle the letter of the item that is **most** important to you.

	Not Important	Somewhat Important	Very Important
a. To increase my appreciation of art, music, literature, and other cultural expressions	( )	( )	( )
b. To discover my vocational interests	( )	( )	( )
c. To develop a new career	( )	( )	( )
d. To attain specific skills that will be useful on a job	( )	( )	( )
e. To meet the academic requirements necessary to enter a profession or graduate school	( )	( )	( )
f. To become involved in social and political concerns	( )	( )	( )
g. To increase my awareness of different philosophies, cultures and ways of life	( )	( )	( )
h. To improve my chances of making more money	( )	( )	( )
i. A degree is required for my present or future job	( )	( )	( )
j. To learn how to participate effectively as a citizen in my community	( )	( )	( )
k. To develop an understanding and an appreciation of science and technology	( )	( )	( )
l. To improve my self image	( )	( )	( )
m. Simply, to learn	( )	( )	( )
n. To improve my professional status	( )	( )	( )
o. To increase my desire and ability to undertake self-directed learning	( )	( )	( )
p. Other (please specify) ______	( )	( )	( )

43. What is the highest academic degree that you intend to obtain? (Mark one)

None	( )	Doctor of Philosophy or Education (Ph.D. or Ed.D.)	( )
Associate degree (AA or equivalent	( )	Medical degree (MD, DDS, etc.)	( )
Bachelor's degree (BA, BS, etc.)	( )	Law degree (LL.B., JD)	( )
Master's degree (MA, MS, etc.)	( )	Bachelor or Doctor of Divinity (BD or DD)	( )

Other, please specify ______

44. Listed below are areas of intellectual competence of particular concern to some students. Indicate where you think you are now in relation to other people your age. For more complete descriptions of these areas, see the section on College Objectives in your Empire State Catalogue. We realize that this is a difficult item, but please give it your best shot.

Areas of Intellectual Competence	Where you are in Relation to Others your age				
	Lowest 10%	Below Aver.	Aver.	Above Aver.	Highest 10%
a. **Communication skills:** (to write and speak clearly, correctly and effectively)	( )	( )	( )	( )	( )
b. **Knowledge** (of information, theories, generalization, methods of inquiry, and criteria for judgments)	( )	( )	( )	( )	( )
c. **Comprehension** of knowledge (thus allowing personal interpretations)	( )	( )	( )	( )	( )
d. Ability to **analyze,** (to break down an experience into basic elements)	( )	( )	( )	( )	( )
e. Ability to **evaluate,** (to make qualitative and quantitative judgments about the value of information, materials and methods)	( )	( )	( )	( )	( )
f. Ability to **synthesize,** (to arrange and combine elements so that new patterns appear)	( )	( )	( )	( )	( )
g. Ability to **apply,** (to use theory in practical activities)	( )	( )	( )	( )	( )

45. Listed below are areas of personal development of particular concern to some students. Please rate where you think you are now in relation to other people your age. For more complete descriptions of these areas, see the section on College Objectives in your Empire State Catalogue. We realize that this is also a difficult item, but please try to respond.

Areas of Personal Development	Where you are in Relation to Others your age				
	Lowest 10%	Below Aver.	Aver.	Above Aver.	Highest 10%
a. **Interpersonal competence,** the ability to interpret the intentions and attitudes of others and to improvise appropriate responses.	( )	( )	( )	( )	( )
b. **Awareness,** openness to new ideas and experiences, sensitivity to social conditions and cultures	( )	( )	( )	( )	( )
c. **Clarifying purposes,** concerns vocational interests, non-vocational interests, and general life-style considerations	( )	( )	( )	( )	( )
d. **Self-reliance,** the capacity to act independently	( )	( )	( )	( )	( )
e. **Self-understanding,** the process of self-examination and discovery of personal motives, strengths, and weaknesses	( )	( )	( )	( )	)
f. **Understanding of others,** the capacity to move beyond relationships of simple understanding to those where there are sympathetic responses to diverse kinds of persons and their conditions	( )	( )	( )	( )	( )
g. **Self-consistency,** the clarification of attitudes and values so that words and actions are in harmony	( )	( )	( )	( )	( )

46. We would appreciate any comments you might have about problems you encountered with this inventory.

______

______

______

______

______

______

Office of Research and Evaluation

Dear Empire State College Graduate:

Empire State College periodically has requests from several sources, including other colleges and state agencies, for information about our recent graduates. The College also is most interested in your progress. This Graduate Followup Questionnaire is designed to provide a picture of what happens to our graduates once they leave the College. The questionnaire covers the topics of further education, present employment and your College experience.

We encourage your participation in this study. If for some reason you do not wish to answer a particular question, it is your option. This is a voluntary questionnaire. Be assured, however, that your responses will be held in the strictest professional confidence. We ask that you take a few minutes to answer the following questions. Please mail the questionnaire to the Office of Research and Evaluation in the enclosed envelope.

Thank you for your help.

Sincerely,

Ernest G. Palola
Assistant Vice President for Research & Evaluation
Empire State College, Saratoga Springs, New York 12866

I. GENERAL INFORMATION

1. Name ______________________

2. Social Security No. ___ ___ ___ - ___ ___ - ___ ___ ___ ___

3. Your ESC Center or Unit? ______________________

4. Your Sex: Male ( ) Female ( )

5. Year of Birth ______________________

6. What was your area of study at ESC? *(e.g., Cultural Studies, Science, Business Administration)*
____

II. FURTHER EDUCATION

7. Have you applied to a graduate or professional school? Yes ( ) No ( ) **(If you checked no, go on to question 20)** If yes, where? *(Please list all schools applied to and be specific such as Graduate School of Social Work, New York University or School of Dentistry, SUNY-Buffalo.)*
____
____

8. How important to you is each of the following reasons for applying to graduate school? **(Mark one answer for each reason.)**

Reasons for Applying to Graduate/Professional School	**Not Important**	**Somewhat Important**	**Very Important**
a. Desired vocational field required an advanced degree	( )	( )	( )
b. Improve chances of receiving a good salary, promotions, etc.	( )	( )	( )
c. Spouse's encouragement	( )	( )	( )
d. Encouragement of ESC faculty, administrators or staff	( )	( )	( )
e. Unable to find satisfactory employment	( )	( )	( )
f. There is a graduate school close to my home	( )	( )	( )
g. Offer of financial assistance	( )	( )	( )
h. High quality of program offered in my field	( )	( )	( )
i. Other (please specify) ______________________	( )	( )	( )

9. Have you been accepted? Yes ( ) No ( ) Still Pending ( ) If yes, where? *(Please list* **all** *schools where accepted.)*
____
____

10. If you were accepted at more than one institution, which one did you decide to attend? ______________________

11. When did you *(or do you plan to)* enroll? ______________________
(month) (year)

12. Did you apply for a: (Check **ALL** that apply)
( ) Master's program ( ) A Doctoral program ( ) A Professional program (law, medicine, dentistry, etc.)
( ) Other (specify ______________________)

13. Have you completed your **graduate degree**? Yes ( ) No ( )

14. Have you been **denied** admission by any graduate or professional school? Yes ( ) No ( )
If yes, which graduate school(s)?
____
____

15. Were you informed officially by the graduate school why you were **denied** admission? Yes ( ) No ( )
If yes, what were the reasons?
____

16. Were there other reasons you think led to **denial** of admission? Yes ( ) No ( ) If yes, what were the reasons?

If you were denied admission, skip this question.

17. As an ESC graduate, have you experienced **major** difficulties in seeking admission to graduate school? Yes ( ) No ( )
If yes, please check ALL explanations that the graduate school gave plus any additional reasons you think were involved. You may check both sets of reasons for any given item.

	Graduate School Reason	Your View of the Reason	Reasons for Admission Difficulty
a.	( )	( )	ESC lacked full accreditation at the time.
b.	( )	( )	Admission difficulty because did not have prerequisites for particular graduate program.
c.	( )	( )	ESC transcript inadequate — D&E's did not describe accurately or fully work completed.
d.	( )	( )	ESC transcript inadequate — not comparable with other transcripts (e.g. unable to determine grade point average).
e.	( )	( )	ESC transcript inadequate — unable to understand ESC educational program.
f.	( )	( )	ESC transcript inadequate — unable to judge amount of work completed and at what level.
g.	( )	( )	ESC transcript inadequate — unable to verify work and life experiences as assessed by ESC.
h.	( )	( )	ESC transcript unacceptable — other (explain)
i.	( )	( )	Delay in issuing ESC transcript to graduate school.
j.	( )	( )	Delay in granting the degree.
k.	( )	( )	Lack of time by admissions staff to read ESC transcript.
l.	( )	( )	Required to take CLEP, GRE or other exams to determine eligibility for admission.
m.	( )	( )	Required to take course(s) before being granted formal admission.
n.	( )	( )	Too many qualified applicants.
o.	( )	( )	Because of my age.
p.	( )	( )	Because of my sex.
q.	( )	( )	Because of my race.
r.	( )	( )	Other (please explain)

18. Did you have difficulty getting your transcript completed in time to apply to graduate school? Yes ( ) No ( )
If yes, was the delay at: **(Check one)** ( ) the center/unit level ( ) the coordinating center level ( ) both

19. Did you ask the College to assist you in your application to graduate school? Yes ( ) No ( )
If yes, a. whom did you ask? Your mentor Yes ( ) No ( )
Your learning center/unit Dean Yes ( ) No ( )
Registrar's Office Yes ( ) No ( )
Other (explain)
b. Did you receive the assistance requested? Yes ( ) No ( )
c. If yes, what was done?

20. Have you been involved in any other educational activity since graduation *(e.g., an adult education course, a management training program or a weekend seminar)*? Yes ( ) No ( ) If yes, please describe.

21. What is the highest academic degree that you intend to complete?
a. ( ) No further degree beyond baccalaureate
b. ( ) Master's degree (M.A., M.S., M.B.A., etc.)
c. ( ) Doctor's degree (Ph.D., Ed.D., D.B.A.)
d. ( ) Professional degree (medicine, law, theology, dentistry, etc.)
e. ( ) Other (please specify)
f. ( ) Undecided

22. If Empire State had a master's program, would you apply? Yes ( ) No ( ) Uncertain ( )

23. What subject matter area would you apply for in an ESC master's program?

GRADUATE SCHOOL EXPERIENCES

If you have been in graduate school for at least one semester (or quarter), please answer the following questions:
(If you have not, please go on to question 27)

24. How well did ESC's educational program help you develop the necessary attitudes and skills for graduate or professional school?
Very Poorly ( ) Not Very Well ( ) Moderately Well ( ) Very Well ( )

25. Were any particular attitudes, skills and learning experiences from ESC especially helpful to you in graduate school? *(e.g., process of clarifying goals, learned how to use community resources, etc.)* Please describe

III. PRESENT EMPLOYMENT

27. What is your present occupation? *(Please be as specific as possible such as: Shop Foreman, Ford Plant; Homemaker; Student; Junior High School Teacher; Salesclerk, Sears.)*

28. What was your occupation at time of admission to ESC? If same as above, check here ( ). Please be specific.

29. If you changed jobs, did you change after graduating from ESC? Yes ( ) No ( )

30. Did your ESC experience lead you to seek different employment? Yes ( ) No ( )

31. How many hours per week are you presently being **paid** to work? *(Mark one)*
    - ( ) Does not apply (e.g., unemployed, homemaker, retired)
    - ( ) 10 hours or less
    - ( ) Between 11 and 20 hours
    - ( ) 21-30 hours
    - ( ) 31-40 hours
    - ( ) Over 40 hours

32. Have you experienced major difficulties in **seeking** employment with an ESC degree?
    Yes ( ) No ( ) Not applicable — already had job at time ( )

33. If yes, please check **ALL** reasons that you think were involved:
    - a. ( ) Denied employment because did not have required skills or training for the particular job.
    - b. ( ) ESC transcript inadequate — D&E's do not describe adequately or fully work completed.
    - c. ( ) ESC transcript inadequate — Not comparable with other transcripts (e.g., unable to determine grade point average.)
    - d. ( ) ESC transcript inadequate — employer unable to understand ESC educational program.
    - e. ( ) ESC transcript inadequate — employer unable to judge amount of work completed and at what level.
    - f. ( ) ESC transcript inadequate — employer unable to verify work and life experiences as assessed by ESC.
    - g. ( ) ESC transcript unacceptable — Other (explain)
    - h. ( ) Delay in issuing transcript to employer.
    - i. ( ) Too many qualified applicants.
    - j. ( ) Because of my age.
    - k. ( ) Because of my sex.
    - l. ( ) Because of my race.
    - m. ( ) Other (please explain) __________

34. Have your employment circumstances changed as a **direct result** of having an ESC degree? Yes ( ) No ( )
    If yes, please check **all** appropriate responses.
    - a. ( ) Received higher pay and/or job benefits.
    - b. ( ) Obtained greater job responsibilities.
    - c. ( ) Increased professional status.
    - d. ( ) Received job promotion.
    - e. ( ) Obtained greater job security.
    - f. ( ) Improved job satisfaction.
    - g. ( ) Became overqualified for present job responsibilities.
    - h. ( ) Other (please specify) __________

35. With your degree, have you still been unable to:
    - a. ( ) find full time satisfactory employment?
    - b. ( ) maintain present job because of current recession?
    - c. ( ) qualify for promotion that you expected?
    - d. ( ) Other (please explain) __________

36. Listed below are some work values that may be important to your present or future job. Please check the degree of importance each of these values has for you.

Work Value	Not Important	Somewhat Important	Very Important
a. Opportunities for advancement	☐	☐	☐
b. Stable and secure future	☐	☐	☐
c. Use my special talents and abilities	☐	☐	☐
d. Variety in work assignments	☐	☐	☐
e. Develop personal friendships with coworkers	☐	☐	☐
f. Avoid high pressure situations	☐	☐	☐
g. Independence (extent to which I can work on my own.)	☐	☐	☐
h. Family and work responsibilities are of equal value	☐	☐	☐
i. Chance to exercise leadership	☐	☐	☐
j. Achieve a high income	☐	☐	☐
k. Desire to make a contribution to knowledge	☐	☐	☐
l. Obtain increased prestige and social status	☐	☐	☐
m. Opportunity to travel	☐	☐	☐
n. Other (please specify) ________	☐	☐	☐

37. Do you think the College should have some kind of job placement service *(e.g., help you locate suitable employment)*?
Yes ☐ No ☐ Unsure ☐

38. Do you think the College should have some kind of career development service *(e.g., help you plan for a new career)*?
Yes ☐ No ☐ Unsure ☐

IV. EVALUATION OF ESC EXPERIENCE

39. As you look back on your learning experiences now, what is the **single** most important thing that you gained while at the College?

____

____

____

____

40. What do you think of now as the **single** most disappointing thing that you did, or that occurred, while you attended the College?

____

____

____

____

41. As a result of your ESC experience, to what extent have you progressed or benefited in each of the following areas. **(CHECK the one response that best applies for each area.)**

Experience Area	None or Little	Some	A Moderate Amount	A Great Deal	A Very Great Deal
a. Writing and speaking — ability to express yourself effectively	☐	☐	☐	☐	☐
b. Awareness of different philosophies, cultures, and ways of life	☐	☐	☐	☐	☐
c. Ability to analyze — breakdown an experience into its basic parts	☐	☐	☐	☐	☐
d. Intellectual curiosity — discovering new knowledge and understanding of problems	☐	☐	☐	☐	☐
e. Ability to evaluate — judge value of knowledge, arguments and methods	☐	☐	☐	☐	☐
f. Personal development — understand your abilities, limitations, interests, values	☐	☐	☐	☐	☐
g. Enhance quality of your life-appreciation and use of fine arts and humanities	☐	☐	☐	☐	☐
h. Knowledge of concepts, methods and facts in new fields of study	☐	☐	☐	☐	☐
i. Sense of achievement and self satisfaction — accomplish personal goals	☐	☐	☐	☐	☐
j. Independence — ability to assume responsibility for own learning	☐	☐	☐	☐	☐
k. Ability to synthesize — organize ideas and experience into new relationships	☐	☐	☐	☐	☐

42. Would you like to receive a copy of the research report on this study? Yes ☐ No ☐

43. We would appreciate any comments you might have about this questionnaire. ____

____

Empire State College
Office of Research and Evaluation

Dear Empire State College Student:

The Student Experience Questionnaire (SEQ) is the second part of the long term effectiveness study undertaken by the Office of Research and Evaluation. The overall aim of this research is to uncover what kinds of students change in what kinds of ways following what kinds of learning experiences and at what costs.

The SEQ is designed to provide a picture of ESC students who have completed the advanced standing process. The questionnaire covers the degree program and portfolio process, the mentor/student relationship, and learning resources used during your contracts. Just as on other research instruments, we ask for identifying information to allow us to carry out later parts of the study.

We appreciate your response to the questions which reflect your perceptions, judgments, and experiences. If for some reason you do not wish to answer a particular question, it is your option. Be assured, however, that your responses will be held in the strictest professional confidence.

We think that the SEQ will provide you and the college with valuable information about degree programs and the portfolio process. The Office of Research and Evaluation will prepare various reports using aggregate information obtained from the SEQ and send you a copy. This questionnaire should take you no longer than 15-30 minutes to complete. Please mail the SEQ to the Office of Research and Evaluation in the enclosed envelope.

Thank you for your help.

Sincerely,

Ernest G. Palola
Assistant Vice President
for Research & Evaluation
Empire State College
Saratoga Springs, New York 12866

I. GENERAL INFORMATION

1. Name ______________________________
Last First Middle

2. Social Security Number ___ ___ ___ - ___ ___ - ___ ___ ___ ___

3. Have your educational objectives changed since entering ESC? ( ) Yes ( ) No

If you changed your objectives, please describe. ______________________________

____

____

4. How many learning contracts have you completed since enrolling at ESC? Please check total number of contracts completed and for **each** contract check contract status.

Contracts Completed	Contract No.	Your Contract Status
a. ( ) One contract completed	1	( ) Half-time ( ) Full-time
b. ( ) Two contracts completed	2	( ) Half-time ( ) Full-time
c. ( ) Three contracts completed	3	( ) Half-time ( ) Full-time
d. ( ) Four contracts completed	4	( ) Half-time ( ) Full-time
e. ( ) Five contracts completed	5	( ) Half-time ( ) Full-time
f. ( ) Six or more contracts completed	6	( ) Half-time ( ) Full-time

II. DEGREE PROGRAM AND PORTFOLIO PROCESS

5. There are many people who might have assisted you in preparing your portfolio and degree program. Please check the amount of help received from each of the people listed below. (Answer **only amount of help received** for those from whom you sought help.)

People Available	Received No Help	Received Less Than I Wanted	Received Adequate Help	Received More Help Than I Expected
a. Your mentor (including unit coordinator)	( )	( )	( )	( )
b. Your spouse	( )	( )	( )	( )
c. Other mentors	( )	( )	( )	( )
d. Other students	( )	( )	( )	( )
e. Your friends	( )	( )	( )	( )
f. Dean of your center/unit	( )	( )	( )	( )
g. Associate Dean of your center/unit	( )	( )	( )	( )
h. Assistant Dean of your center/unit	( )	( )	( )	( )
i. Assessment Specialist at your center/unit	( )	( )	( )	( )
j. Other (please specify) ______________ ______________	( )	( )	( )	( )

6. How much time was spent by **you and your mentor** (in face to face or telephone contact) in the degree program and portfolio process? (Mark one)

a. ( ) Less than an hour
b. ( ) 1-4 hours
c. ( ) 5-10 hours
d. ( ) 11-20 hours
e. ( ) 21-30 hours
f. ( ) More than 30 hours

7. **How much time did you personally spend (excluding mentor contacts) in the preparation of your portfolio and degree program statement? (Mark one)**

a. ( ) Less than an hour **c. ( ) 5-10 hours** **e. ( ) 21-50 hours** **g. ( ) Over 75 hours**
b. ( ) 1-4 hours **d. ( ) 11-20 hours** **f. ( ) 51-75 hours**

8. **Did you appear before a faculty assessment committee to answer questions about your portfolio? Yes ( ) No ( )**

9. **When did you think a decision was reached on the amount of your advanced standing awarded? (Mark one)**
   - a. ( ) After you presented your completed portfolio to your mentor.
   - b. ( ) After your mentor presented the portfolio to the Associate Dean.
   - c. ( ) After the learning center/unit assessment committee reviewed the portfolio.
   - d. ( ) After the Saratoga Office of Program Review and Assessment reviewed the portfolio.
   - e. ( ) After the Office of Vice President for Academic Affairs reviewed the portfolio.
   - f. ( ) Other (please specify) ______________________________

10. What is your perception of the Saratoga Office of Program Review and Assessment? (Check ALL that apply)
    - a. ( ) Reviews and evaluates portfolio to see if advanced standing to be awarded follows College policy.
    - b. ( ) Reviews and evaluates the worth of student learning in the portfolio.
    - c. ( ) Reviews and evaluates the portfolio to see if there is adequate documentation for the advanced standing to be awarded.
    - d. ( ) Evaluates and determines the amount of advanced standing to be awarded.
    - e. ( ) Reviews and evaluates local assessment committee recommendations at the learning center/unit.
    - f. ( ) Reviews and evaluates the portfolio to determine how much advanced standing the College will award.
    - g. ( ) Other (please specify) ______________________________

11. The entire degree program and portfolio process includes document preparation, local committee review and Coordinating Center review. Describe your reactions to the process by **CIRCLING the appropriate number** for each of the following descriptions:

	Your Assessment of the Process					
a. I found the degree program and portfolio process to be essentially fair (I gained the credit I deserved)	FAIR	1	2	3	4	UNFAIR
b. I received **clear** messages (e.g. from my mentor, assessment committee, College documents) regarding the preparation of my portfolio and degree program statement	CLEAR	1	2	3	4	UNCLEAR
c. I found the process was inefficient	INEFFICIENT	1	2	3	4	EFFICIENT
d. I found the process to be impersonal	IMPERSONAL	1	2	3	4	PERSONAL
e. I found the process was essentially a bureaucratic exercise for credit	EXERCISE FOR CREDIT	1	2	3	4	A STIMULATING CHALLENGE

12. To what extent did the portfolio and degree program process help you in the following **areas: (Check ONE response for each area).**

	Extent of Improvement				
Areas	None	Less than I wanted	Adequate	More than Adequate	Much more than I expected
a. Improve my **communication skills** through writing the personal essay and organizing the portfolio	( )	( )	( )	( )	( )
b. Improve my **ability to analyze** the learnings from my life worthy of credit	( )	( )	( )	( )	( )
c. Improve my **ability to evaluate** past learnings in my life. (i.e., judge the value of past activities and experiences)	( )	( )	( )	( )	( )
d. Improve my **ability to synthesize** (examine parts of my life in terms of a possible new future, career or style of life)	( )	( )	( )	( )	( )
e. Increase my **self-understanding**	( )	( )	( )	( )	( )
f. Achieve my overall **academic goals**	( )	( )	( )	( )	( )
g. Achieve my overall **personal goals**	( )	( )	( )	( )	( )
h. Other (please specify) ______________	( )	( )	( )	( )	( )

13. **In working with your mentor (and others in the College) to put together your portfolio and degree program statement, what percent of the final portfolio and degree program statement is primarily your work (i.e., written by you)?**

a. ( ) 10%, I did little **c. ( ) 60%, I did most of the work** **e. ( ) 90%, I did almost everything**
b. ( ) 40%, I did a fair amount **d. ( ) 80%, I did a lot** **f. ( ) 100%, I did everything**

14. Do you have any suggestions for improving the portfolio and degree program process? ______________________________

____

____

____

For the following questions, answer about the mentor, tutor, or unit coordinator **with whom you worked the MOST during your LAST COMPLETED learning contract.**

(NOTE: The single term "mentor" will be used in place of mentor, tutor, unit coordinator in the following items.)

15. During the last **COMPLETED** contract, check the response that best describes how you and your mentor developed the contract:

Contract Activities	By me alone	Mostly by me	Equally by my mentor and me	Mostly by my mentor	By my mentor alone
a. Selecting study topic(s)	( )	( )	( )	( )	( )
b. Selecting learning resources	( )	( )	( )	( )	( )
c. Identifying ways to evaluate your learning	( )	( )	( )	( )	( )
d. Writing of first draft	( )	( )	( )	( )	( )
e. Evaluating work completed	( )	( )	( )	( )	( )

16. During the most recently COMPLETED contract, how often did you meet with your mentor or talk to her/him by phone? (Count any contact no matter how short and check ONE response.)

( ) Never ( ) Twice a week ( ) Once every two weeks ( ) Once a month ( ) Other (please specify)
( ) Daily ( ) Once a week ( ) Once every three weeks ( ) Once every two months ____________

17. Rate the relationship with your mentor on the following characteristics that were important to learning gained in your last COMPLETED contract.

Characteristics	never	occasionally	frequently	almost always	undecided
a. My mentor challenged me to work at a level higher than I expected.......	( )	( )	( )	( )	( )
b. My mentor often made me think through difficult questions rather than provide answers..	( )	( )	( )	( )	( )
c. My mentor clearly took into account my personal desires in planning the degree program..	( )	( )	( )	( )	( )
d. My mentor eased my anxieties when I worried about contract work.......	( )	( )	( )	( )	( )
e. The relationship with my mentor was educationally effective.............	( )	( )	( )	( )	( )
f. The relationship with my mentor was personally satisfying...............	( )	( )	( )	( )	( )
g. My mentor let me have "lots of rope" to pursue my goals................	( )	( )	( )	( )	( )

18. On the last completed learning contract, did your mentor provide constructive evaluation of your work?

( ) No ( ) Yes, but inadequate ( ) Yes, adequate ( ) Yes, more than adequate

19. Overall, on the last completed learning contract, rate the relationship with your mentor?

( ) No feelings ( ) We did not work well together ( ) We worked fairly well together ( ) We worked well together
( ) We worked very well together

IV. LEARNING RESOURCES

Learning resources that can be used by students in contracts are: **people** (e.g., tutors, special consultants, employers); **places** (e.g., museums, libraries, exhibits, job experiences); and **special materials** (e.g., modules, programmed texts, SUNY Independent Study courses). Listed below are a number of learning resources you might have used during the LAST CONTRACT COMPLETED. Please indicate for EACH RESOURCE whether it was used and your rating of its usefulness.

20. Did you use an ESC learning module? Yes ( ); No ( ) If yes, please specify module and rate each used:

Module Title ____

Rating of Module in achieving contract objectives:
Useless ( ) Inadequate ( ) Adequate ( ) More than adequate ( ) Superior for my purposes ( )
Did you use the full module? (Check one) Full ( ) Part ( )
Did you use the module along with mentor or tutor assistance? (Check one) Used with Mentor ( ) Used with Tutor ( )
Used independently of mentor or tutor ( ) Other ____________________________ ( )

21. Did you take a course at another college? Yes ( ); No ( ) If yes, please indicate course, college and rating of course:

Course Title and College ____

____

Rating of Course in achieving contract objectives: Useless ( ) Less helpful than I wanted ( )
Adequate for my objectives ( ) More than adequate ( ) Superior for my objectives ( )
If you received a grade for your work, please indicate grade received.________

If you took a second course in your last contract, please provide the same information:

Course Title and College____

____

Rating of Course in achieving contract objectives: Useless ( ) Less helpful than I wanted ( )
Adequate for my objectives ( ) More than adequate ( ) Superior for my objectives ( )
If you received a grade for your work, please indicate grade received.________

22. Did you use a tutor in the last completed contract? Yes ( ); No ( ) If yes, please indicate subject area and rating for tutor help.

Tutor/Subject Area ____

Rating of tutor help in achieving contract objectives: Useless ( ) Less helpful than I wanted ( )
Adequate for my objectives ( ) More than adequate ( ) Superior for my objectives ( )

23. Did you participate in ESC group studies in your last completed contract? Yes ( ); No ( ) If yes, please indicate topic of study and your evaluation.

	Rating of Group Studies in Achieving Objectives				
Group Study Topic	Useless	Less than I wanted	Adequate	More than Adequate	Superior
____________________	( )	( )	( )	( )	( )

24. Did you use a SUNY Independent Study course in the last contract? Yes ( ); No ( ) If yes, please indicate course title and rating.

	Rating of Independent Study in Achieving Objectives				
Course Title	Useless	Less than I wanted	Adequate	More than Adequate	Superior
____________________	( )	( )	( )	( )	( )

25. Listed below are **other learning resources** that you might have used in the LAST COMPLETED CONTRACT. Please check off those that you **DID** use and indicate your evaluation.

Use in Contract (Check EACH that applies)	Your Rating in Achieving Contract Objectives				
	Useless	Less than I wanted	Adequate	More than Adequate	Superior
( ) ESC Residential workshop	( )	( )	( )	( )	( )
( ) Museums, art galleries, etc.	( )	( )	( )	( )	( )
( ) TV programs (e.g., Ascent of Man)	( )	( )	( )	( )	( )
( ) Field research projects	( )	( )	( )	( )	( )
( ) Local libraries	( )	( )	( )	( )	( )
( ) On the job experiences	( )	( )	( )	( )	( )
( ) Travel	( )	( )	( )	( )	( )
( ) Field trips	( )	( )	( )	( )	( )
( ) Films or slides	( )	( )	( )	( )	( )
( ) Community lectures, seminars, etc.	( )	( )	( )	( )	( )
( ) Laboratories	( )	( )	( )	( )	( )
( ) Other (please specify) ____________	( )	( )	( )	( )	( )

26. We would appreciate any comments you have about this questionnaire. ____________________

Faculty Rating Form
Empire State College
Office of Research and Evaluation

Dear Faculty Member:

This Rating Form is an important part of the Program Effectiveness and Related Costs (PERC) strategy for studying institutions of higher education. The Rating Form is not a test. There are no right answers. It simply provides a way to look at the improvement of students on several dimensions as they progress through a college or university.

On the following pages, you are asked to rate a particular student on seven areas of intellectual competence and personal development. Each area is defined at the top (see A below) and is to be rated in terms of a nine point scale. The four boxes (see B below) in the middle of the page contain specific examples to assist your rating. We suggest that you take time to look at each scale carefully, reading the boxes across from left to right and back before making a rating. Note that the arrows from the boxes to the scale illustrate where a particular statement fits on the scale. We ask you to **CIRCLE** the appropriate number from 1 to 9 on each scale that indicates the best estimate of the student's current level.

You should be as candid and accurate in your ratings as you can be. We are not interested in having you rate this student higher (or lower) unless his/her actual learning corresponds to that rating.

An Example.

This student entered the College with two years of previous college work already and had a fair competence in analysis at entry. Thus, the mentor circled a rating of 4 on the entry scale.

ABILITY AT ANALYSIS

A) Definition: Analysis is the ability to break down a book or other form of communication (e.g., an experience such as a job) into parts, to identify the importance of the parts and the way they are organized. The term also relates to identifying the conclusions of a communication (e.g., a book).

Rating at time of entry — CIRCLE ONE NUMBER

Low Average High

1 2 3 4 5 6 7 8 9

½	½	½	½
This student sometimes has trouble distinguishing the strengths and weaknesses in an author's argument but generally can recognize the basic facts and relative importance of ideas (e.g., He/She can detect the facts presented in a book).	This student sometimes has trouble distinguishing the key relationships of a communication but generally can detect weaknesses and strengths in the author's argument (e.g., He/She can recognize the facts that support an author's point of view in a book and those that do not).	This student sometimes has trouble identifying the organizational principles of a communication but can generally distinguish between important and unimportant factors (e.g., He/She can recognize the key relationships among parts of a book).	This student can generally identify the organizational principles that underlie a communication (e.g., He/She can recognize the author's purpose and point of view.)

1. COMMUNICATION SKILLS

Definition: Communication skills refers to the ability to read, speak and write clearly, correctly and effectively.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	This student has serious difficulty expressing his/her thoughts (e.g., people frequently have trouble understanding papers he/she writes).		This student has some trouble expressing his/her thoughts (e.g., people sometimes say that they have trouble understanding his/her papers).		This student sometimes has trouble communicating highly complex ideas but is able to express most thoughts in clear, easily understandable language (e.g., people generally can understand his/her papers).		This student is generally able to express highly complex, ideas in clear, easily understood language (e.g., He/She can write a term paper that does not contain errors in grammar or poor logic and conveys his/her ideas in a stimulating fashion).	

2. ABILITY AT ANALYSIS

Definition: Analysis is the ability to break down a book or other form of communication (e.g., an experience such as a job) into parts, to identify the importance of the parts and the way they are organized. The term also relates to identifying the conclusions of a communication (e.g., a book).

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	This student sometimes has trouble distinguishing the strengths and weaknesses in an author's argument but generally can recognize the basic facts and relative importance of ideas (e.g., He/She can detect the facts presented in a book.)		This student sometimes has trouble distinguishing the key relationships of a communication but generally can detect weaknesses and strengths in the author's argument (e.g., He/She can recognize the facts that support an author's point of view in a book and those that do not).		This student sometimes has trouble identifying the organizational principles of a communication but can generally distinguish between important and unimportant factors (e.g., He/She can recognize the key relationships among parts of a book).		This student can generally identify the organizational principles that underlie a communication (e.g., He/She can recognize the author's purpose and point of view).	

3. SKILL AT SYNTHESIS

Definition: Synthesis involves arranging and combining ideas so that a new structure emerges. The ability to synthesize demonstrates the ability to form a theory, organize a presentation or propose a solution to a given problem.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	This student sometimes has trouble communicating ideas in an organized way but is able to understand concepts drawn from several fields of knowledge (e.g., He/She can read and understand materials in a variety of subject areas).		This student sometimes has trouble proposing solutions but is able to communicate ideas to others in an organized way (e.g., He/She could develop a plan for teaching a course).		This student sometimes has trouble developing full theories but is able to propose new solutions to problems (e.g., He/She can take research on childrens learning and develop an effective plan for solving a classroom problem).		This student is able to develop his/her own theories to explain a set of ideas (e.g., He/She could construct a theory of learning applicable to classroom teaching).	

4. ABILITY AT APPLICATION

Definition: **Application is the ability to use theories and concepts in new situations and practical activities. Application also implies the ability to compare one set of experiences with another in order to consider their implications. Application uses specific knowledge to identify problems, to propose, and to implement solutions.**

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	This student would have much trouble applying learned concepts to other situations (e.g., He/She could conduct a small study in his/her local community but only with much faculty help).		This student sometimes has trouble applying learned concepts to other situations (e.g., He/She could conduct a small study in his/her local community but only with some faculty help).		This student is fairly good at applying learned concepts to other situations (e.g., He/She could conduct a small study in his/her local community guided by ideas drawn from readings).		This student is very good at applying learned concepts to other situations (e.g., He/She could conduct a large research project in his/her local community guided by ideas drawn from readings).	

5. CLARIFYING PURPOSES

Definition: Clarifying purposes is the ability to set plans and priorities that bring together a person's vocational interests, personal values and life style considerations.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	This student has done only a little thinking about his/her job and personal interests and the kind of life he/she wants to lead.		This student has begun to clarify his/her job and personal interests and the kind of life he/she wants to lead.		This student is planning specifically his/her job and personal interests and is deciding upon the kind of life he/she wants to lead.		This student has carefully reviewed his/her job and personal interests and decided upon the kind of life he/she wants to lead (e.g., He/She has chosen a major area of study which is in harmony with his/her goals and personal values).	

6. INCREASING AWARENESS

Definition: Awareness is the willingness to explore ideas, values, attitudes and individuals from backgrounds quite different from your own. With increased awareness, a person has become sensitized to the diverse activities of man and the varied social conditions of human existence.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	It generally takes him/her much time to get used to a new idea or to be comfortable with new experiences or people (e.g., He/She is comfortable around people different from him/her only after he/she has had lots of time to get to know them).		It generally takes him/her some time to get used to a new idea or to be comfortable with new experiences or people (e.g., He/She is comfortable around people different from him/her after he/she has had a chance to get to know them).		This student does not often explore new things but is open-minded about different ideas, experiences, and individuals (e.g., He/She is fairly comfortable around people who are different from him/her).		This student is often exploring new ideas, experiences and likes to be around individuals different from himself/herself (e.g., He/She seeks out people who are different from his/her).	

7. IMPROVING SELF CONFIDENCE

Definition: Self confidence refers to a realistic knowledge of one's own values and abilities and a belief in one's ability to achieve personal goals regardless of the opinions of others.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	This student has not assessed his/her values and abilities very well although he/she can undertake some tasks that he/she chooses (e.g., He/She can do college level work but is uneasy about how well he/she will perform).		This student has partially assessed his/her values and abilities and can undertake some tasks that achieve his/her goals (e.g., He/She can do college level work that will be judged adequate by teachers).		This student has assessed his/her values and abilities and can undertake many tasks that satisfy his/her personal goals (e.g., He/She can do college work fairly easily and satisfy his/her educational aspirations).		This student has realistically assessed his/her strengths and weaknesses and believes he/she has the ability to undertake almost all tasks he/she chooses (e.g., He/She is confident of his/her abilities to do college work at above average performance).	

8. We would appreciate any comments you have on this Rating Form. ____________________

Student Rating Form
Empire State College
Office of Research and Evaluation

Dear Student:

This Rating Form is an important part of the Program Effectiveness and Related Costs (PERC) strategy for studying institutions of higher education. The Rating Form is not a test. There are no right answers. It simply provides a way to look at the improvement of students on several dimensions as they progress through a college or university.

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An Example.

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ABILITY AT ANALYSIS

A) Definition: Analysis is the ability to break down a book or other form of communication (e.g., an experience such as a job) into parts, to identify the importance of the parts and the way they are organized. The term also relates to identifying the conclusions of a communication (e.g., a book).

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	I sometimes have trouble distinguishing the strengths and weaknesses in an author's argument but generally can recognize the basic facts and relative importance of ideas (e.g., I can detect the facts presented in a book).		I sometimes have trouble distinguishing the key relationships of a communication but generally can detect weaknesses and strengths in the author's argument (e.g., I can recognize the facts that support an author's point of view in a book and those that do not).		I sometimes have trouble identifying the organizational principles of a communication but can generally distinguish between important and unimportant factors (e.g., I can recognize the key relationships among parts of a book).		I can generally identify the organizational principles that underlie a communication (e.g., I can recognize the author's purpose and point of view.)	

1. COMMUNICATION SKILLS

Definition: Communication skills refers to the ability to read, speak and write clearly, correctly and effectively.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	I have serious difficulty expressing my thoughts (e.g., people frequently have trouble understanding papers I write).		I have some trouble expressing my thoughts (e.g., people sometimes say that they have trouble understanding my papers).		I sometimes have trouble communicating highly complex ideas but am able to express most thoughts in clear, easily understandable language (e.g., people generally can understand my papers).		I am generally able to express highly complex, ideas in clear, easily understood language (e.g., I can write a term paper that does not contain errors in grammar or poor logic and conveys my ideas in a stimulating fashion).	

2. ABILITY AT ANALYSIS

Definition: Analysis is the ability to break down a book or other form of communication (e.g., an experience such as a job) into parts, to identify the importance of the parts and the way they are organized. The term also relates to identifying the conclusions of a communication (e.g., a book).

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	I sometimes have trouble distinguishing the strengths and weaknesses in an author's argument but generally can recognize the basic facts and relative importance of ideas (e.g., I can detect the facts presented in a book.)		I sometimes have trouble distinguishing the key relationships of a communication but generally can detect weaknesses and strengths in the author's argument (e.g., I can recognize the facts that support an author's point of view in a book and those that do not).		I sometimes have trouble identifying the organizational principles of a communication but can generally distinguish between important and unimportant factors (e.g., I can recognize the key relationships among parts of a book).		I can generally identify the organizational principles that underlie a communication (e.g., I can recognize the author's purpose and point of view).	

3. SKILL AT SYNTHESIS

Definition: Synthesis involves arranging and combining ideas so that a new structure emerges. The ability to synthesize demonstrates the ability to form a theory, organize a presentation or propose a solution to a given problem.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2 ½	3	4 ½	5	6 ½	7	8 ½	9
	I sometimes have trouble communicating ideas in an organized way but I am able to understand concepts drawn from several fields of knowledge (e.g., I can read and understand materials in a variety of subject areas).		I sometimes have trouble proposing solutions but am able to communicate ideas to others in an organized way (e.g., I could develop a plan for teaching a course).		I sometimes have trouble developing full theories but am able to propose new solutions to problems (e.g., I can take research on childrens learning and develop an effective plan for solving a classroom problem).		I am able to develop my own theories to explain a set of ideas (e.g., I could construct a theory of learning applicable to classroom teaching).	

4. ABILITY AT APPLICATION

Definition: Application is the ability to use theories and concepts in new situations and practical activities. Application also implies the ability to compare one set of experiences with another in order to consider their implications. Application uses specific knowledge to identify problems, to propose, and to implement solutions.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	I would have much trouble applying learned concepts to other situations (e.g., I could conduct a small study in my local community but only with much faculty help).		I sometimes have trouble applying learned concepts to other situations (e.g., I could conduct a small study in my local community but only with some faculty help).		I am fairly good at applying learned concepts to other situations (e.g., I could conduct a small study in my local community guided by ideas drawn from readings).		I am very good at applying learned concepts to other situations (e.g., I could conduct a large research project in my local community guided by ideas drawn from readings).	

5. CLARIFYING PURPOSES

Definition: Clarifying purposes is the ability to set plans and priorities that bring together a person's vocational interests, personal values and life style considerations.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	I have done only a little thinking about my job and personal interests and the kind of life I want to lead.		I have begun to clarify my job and personal interests and the kind of life I want to lead.		I am planning specifically my job and personal interests and am deciding upon the kind of life I want to lead.		I have carefully reviewed my job and personal interests and decided upon the kind of life I want to lead (e.g., I have chosen a major area of study which is in harmony with my goals and personal values).	

6. INCREASING AWARENESS

Definition: Awareness is the willingness to explore ideas, values, attitudes and individuals from backgrounds quite different from your own. With increased awareness, a person has become sensitized to the diverse activities of man and the varied social conditions of human existence.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	It generally takes me much time to get used to a new idea or to be comfortable with new experiences or people (e.g., I am comfortable around people different from me only after I have had lots of time to get to know them).		It generally takes me some time to get used to a new idea or to be comfortable with new experiences or people (e.g., I am comfortable around people different from me after I have had a chance to get to know them).		I do not often explore new things but am open-minded about different ideas, experiences, and individuals (e.g., I am fairly comfortable around people who are different from me).		I often explore new ideas, experiences and like to be around individuals different from me (e.g., I seek out people who are different from me).	

7. IMPROVING SELF CONFIDENCE

Definition: Self confidence refers to a realistic knowledge of one's own values and abilities and a belief in one's ability to achieve personal goals regardless of the opinions of others.

Rating at time of entry — CIRCLE ONE NUMBER

Low				Average				High
1	2	3	4	5	6	7	8	9
	½		½		½		½	
	I have not assessed my values and abilities very well although I can undertake some tasks that I choose (e.g., I can do college level work but I am uneasy about how well I will perform).		I have partially assessed my values and abilities and can undertake some tasks that achieve my goals (e.g., I can do college level work that will be judged adequate by teachers).		I have assessed my values and abilities and can undertake many tasks that satisfy my personal goals (e.g., I can do college work fairly easily and satisfy my educational aspirations).		I have realistically assessed my strengths and weaknesses and believe I have the ability to undertake almost all tasks I choose (e.g., I am confident of my abilities to do college work at above average performance).	

8. We would appreciate any comments you have on this Rating Form.

Empire State College

Dear Faculty Member:

The recent emergence of programs featuring individualized education has concurrently led to the emergence of nontraditional roles for faculty. Who are the new professionals, what do they do, why, what do they think about their role, how do they change, and what are some of their problems: these are some important questions. However, there is to date almost no systematic data available. Thus, the new professionals are the focus of this research effort co-sponsored by the Danforth Foundation Center for Individualized Education, the HEW Fund for the Improvement of Postsecondary Education, and Empire State College.

I hope you will take the 15-20 minutes necessary to complete this questionnaire. It is an essential part of multiple perspective strategy which also includes interviews, observation, and participation as a part-time mentor here at Empire. Since there are still not many faculty engaged in individualized educational programs, each questionnaire response is vital. I will, of course, make a number of complementary copies of the final report available at each institution with participating faculty.

Note that the questionnaire is anonymous. No attempt will be made to relate any response with an individual.

Please return your completed questionnaire and such comments as you may wish to add in the enclosed envelope. Thank you.

Sincerely,

Ernest G. Palola
Office of Research and Evaluation
Empire State College
Saratoga Springs, New York 12866

The term **Program** is used throughout this questionnaire to denote the particular individualized setting in which you reside. Unless your entire institution is individualized (e.g., the many parts of the Community College of Vermont), please answer only about the individualized unit with which you are associated. Examples of "programs" are New College (University of Alabama), Empire State College, Contract Center (Webster College), etc.

I. SOME BACKGROUND QUESTIONS

1. Your Individualized Program (e.g., New College, University of Alabama).

____

2. If you are part of a center or unit within this program, please specify (e.g., Northeast Center, Empire State College).

____

3. Are you considered a full-time faculty member in the program? ________

4.A) Mark all types of jobs that you have held for at least a year since earning your bachelor's degree (but not counting part-time work during graduate school).

B) How many years were you employed in each type of job?

C) What were you doing immediately prior to taking a job in this program? (Mark the one that best applies)

Type of Job	(A) Have Done	(B) # Years	(C) Did Last
a) teaching in a pre-college program (elementary/secondary)	( )	______	( )
b) teaching in a traditional university or 4 year college	( )	______	( )
c) teaching in a traditional 2 year college	( )	______	( )
d) teaching in a non-traditional 2 or 4 year program	( )	______	( )
e) non-teaching research position	( )	______	( )
f) college or university administration	( )	______	( )
g) non-educational-related enterprise (e.g., printer)	( )	______	( )
h) counseling	( )	______	( )
i) graduate school or formal post-doctoral work	( )	______	( )
j) other non-teaching education-related enterprise (e.g., State Education Dept.)	( )	______	( )
k) other (please specify) ______________	( )	______	( )

____

____

5. The number of students currently assigned to you. a) Full-time ________
b) Part-time ________

6. On July 1, 1976, how many years will you have been in the program?
(e.g., 3 ½) ______________________________

7.A) How important was each of the following to you in deciding to become a faculty member in your program? (Please check all that apply)

	Not Important	Somewhat Important	Very Important
a) salary	( )	( )	( )
b) tenure policies	( )	( )	( )
c) large amount of direct, personal, individualized work with students	( )	( )	( )
d) chance to work with adult students	( )	( )	( )
e) challenge of being a facilitator through use of a variety of external learning resources	( )	( )	( )
f) challenge of working with students who have a variety of academic interests	( )	( )	( )
g) chance to work with colleagues from other disciplines	( )	( )	( )
h) dissatisfaction with traditional educational methods	( )	( )	( )
i) academic freedom	( )	( )	( )
j) chance to re-orient my career	( )	( )	( )
k) other (please specify) ______________	( )	( )	( )

____

____

B) Have you been disappointed in any of these expectations?

If so, please explain. ______________________________

____

____

II. ABOUT THE PROGRAM AND YOUR STYLE

8. On the basis of the following features, please compare your program to traditional colleges and universities. (Please check one column for each feature.)

	More Here Than Traditional	About Same As Traditional	More in Traditional
a) level of rigor	( )	( )	( )
b) faculty workload	( )	( )	( )
c) student workload	( )	( )	( )
d) rigor with which students are evaluated	( )	( )	( )
e) opportunities for concentration in a subject area	( )	( )	( )
f) quantity of faculty paperwork	( )	( )	( )
g) amount of student reading	( )	( )	( )
h) amount of student writing	( )	( )	( )
i) amount of student oral presentation	( )	( )	( )
j) faculty influence on decision	( )	( )	( )
k) amount of student library work	( )	( )	( )

9. Please estimate the number of times in the past month you have used the following kinds of learning resources in working with students?

	None	1-5	6-10	11 or more
a) learning modules (organized learning packages)	( )	( )	(✓)	( )
b) other faculty in the program with knowledge of the subject area	( )	( )	( )	( )
c) outside persons (as tutors/adjuncts) from other programs or institutions	( )	( )	( )	( )
d) courses in other programs or institutions	( )	( )	( )	( )
e) correspondence courses (e.g., SUNY Independent Study)	( )	( )	( )	( )
f) special short-term residencies (e.g., Women Studies weekend residency)	( )	( )	( )	( )
g) on-the-job experience	( )	( )	( )	( )
h) field experience, internships	( )	( )	( )	( )
i) other learning resources made available through special arrangements (e.g., museums, galleries, etc.)	( )	( )	( )	( )

10.A) What is your usual style in helping students develop readings and other activities? (Please check the one that best applies since none will fit perfectly.)

a) I select almost all student readings and/or other learning activities. ( )
b) I select most student readings and/or other learning activities. ( )
c) The students and I together select readings and/or other learning activities. ( )
d) The students select most readings and/or other learning activities. ( )
e) The students select almost all readings and/or other learning activities. ( )

B) Has your style of helping students develop readings and other learning activities changed in significant ways while in the program? If so, how?

____

____

____

11.A) How do you and your students relate during get-togethers? (Again, please check the one statement that best applies.)

a) When the students ask questions, I almost always try to answer them. ( )
b) When the students ask questions, I generally try to answer them. ( )
c) My style varies. When students ask questions, I sometimes try to answer and sometimes direct them to other sources. ( )
d) When students ask questions, I generally challenge them to seek out the answers for themselves. ( )
e) When students ask questions, I almost always challenge them to seek out the answers for themselves. ( )

B) Has this aspect of your style changed in significant ways while in the program? If so, how?

____

____

____

12.A) How often do you become involved in the following types of advisement with students? (Check one column for each item.)

	Never	Occasionally	Sometimes	Often	Very Often
a) discussions of students' personal problems	( )	( )	( )	( )	( )
b) discussions about students' vocational plans	( )	( )	( )	( )	( )
c) discussions about students' academic plans beyond undergraduate school	( )	( )	( )	( )	( )
d) helping students deal with institutional "red tape" (e.g., financial aid problems, billing problems)	( )	( )	( )	( )	( )

B) Comments? ____

____

____

____

13.A) Did your program have a formal orientation for you and other new faculty? Yes ( ) No ( )

B) If yes, was it effective? Yes ( ) No ( )

Any comments? ____

____

14. Following is a list of problem areas sometimes encountered by faculty engaged in individualized instruction. Please indicate whether each is a problem in your program.

	Not A Problem	Somewhat of A Problem	A Serious Problem
a) access to laboratory facilities	( )	( )	( )
b) access to library facilities	( )	( )	( )
c) access to courses	( )	( )	( )
d) access of students to one another	( )	( )	( )
e) access to facilities for classroom instruction	( )	( )	( )
f) provisions for advising and counseling of students	( )	( )	( )
g) availability of administrative support services (e.g., xerox, typing)	( )	( )	( )
h) availability of academic support services (e.g., learning modules, media)	( )	( )	( )
i) ease of finding appropriate books for purchase	( )	( )	( )
j) availability of colleagues in one's own specialty	( )	( )	( )
k) availability of field experience opportunities	( )	( )	( )

l) other (please specify) ____ nearly impossible ( ) difficult ( ) doable ( ) easy ( ) very easy ( )

16. Has the "doability" improved for you during your time in the program?

no ( ) a little ( ) some ( ) a great deal ( ) a very great deal ( )

17. What changes have occurred in the following areas since you started in your program? (Please check the one that best applies for each item.)

Areas	Amount of Change				
	Much More Now	Somewhat More Now	About the Same	Somewhat Less Now	Much Less Now
Individual					
a) personal anxiety	( )	( )	( )	( )	( )
b) sense of belonging to the program	( )	( )	( )	( )	( )
c) amount of thinking about myself and my future	( )	( )	( )	( )	( )
d) personal sense of satisfaction	( )	( )	( )	( )	( )
e) general enthusiasm	( )	( )	( )	( )	( )
Relational					
f) positive feelings toward faculty colleagues	( )	( )	( )	( )	( )
g) positive feelings toward program (center) administrators	( )	( )	( )	( )	( )
h) positive feelings toward other administrators	( )	( )	( )	( )	( )
i) flexibility in style of working with students	( )	( )	( )	( )	( )
j) positive feelings toward students with interests different from my own	( )	( )	( )	( )	( )
Institutional					
k) clarity of policies (e.g., on promotions, on acceptable form for student evaluation, etc.)	( )	( )	( )	( )	( )
l) clarity of communication channels	( )	( )	( )	( )	( )
m) overall faculty participation in decision-making	( )	( )	( )	( )	( )
n) overall faculty influence on decisions	( )	( )	( )	( )	( )
o) learning resource availability	( )	( )	( )	( )	( )
p) learning resource usefulness	( )	( )	( )	( )	( )
q) positive climate for faculty	( )	( )	( )	( )	( )
r) amount of secretarial support	( )	( )	( )	( )	( )

Comments? ____

____

____

____

18. In general, how satisfied are you with the following aspects of your personal involvement in the program?

	Not Satisfied	Somewhat Satisfied	Generally Satisfied	Very Satisfied
a) possibilities for promotion	( )	( )	( )	( )
b) my workload	( )	( )	( )	( )
c) my involvement in decisions about curriculum and degree requirements	( )	( )	( )	( )
d) my involvement in other administrative decisions (admissions, etc.)	( )	( )	( )	( )
e) my relationships with my faculty colleagues	( )	( )	( )	( )
f) my job security	( )	( )	( )	( )
g) my relationship with the program (center) administration	( )	( )	( )	( )
h) my relationship with the college (Coordinating Center) administration	( )	( )	( )	( )
i) my salary	( )	( )	( )	( )
j) the quality of my students	( )	( )	( )	( )
k) my academic freedom	( )	( )	( )	( )
l) secretarial support	( )	( )	( )	( )
m) use of learning contracts	( )	( )	( )	( )
n) opportunities for professional development	( )	( )	( )	( )

19. Below are some types of decisions in which faculty sometimes want influence. Please rate, on the left-hand scale, **how important** it is to you to have influence in these types of decisions in your program, and on the right-hand scale, **how much influence** faculty actually do have in your program.

Importance						Extent of Faculty Influence				
Very Important	Important	Neither Important nor Unimportant	Unimportant	Very Unimportant		None	A Little	Some	A Great Deal	Very Great Deal
( )	( )	( )	( )	( )	a) determining program policies	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	b) purchase of special equipment (e.g., videotape)	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	c) selecting deans, associate deans	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	d) selecting other faculty	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	e) promotion of faculty	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	f) tenure decisions	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	g) determining the content of a student's program	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	h) determining types of students to admit to the program	( )	( )	( )	( )	( )
( )	( )	( )	( )	( )	i) selection of secretaries	( )	( )	( )	( )	( )

III. ABOUT YOUR CAREER

20. Overall, how successful is your program in meeting the needs of its students?

not successful at all ( ) somewhat successful ( ) fairly successful ( ) generally successful ( ) very successful ( )

21. How long do you want to remain as a faculty member in your program?

I want to leave as soon as possible ( ) no more than 1 to 2 years ( ) no more than 3 to 5 years ( ) 5 years or more ( ) as long as possible ( )

Reasons? ______

22.A) What kinds of professional development activities have you engaged in during the past year?

	Approximate Number
a) read books in my specialty	______
b) read serious books outside my specialty	______
c) wrote papers for publication	______
d) wrote books or monographs	______

Please describe briefly any other professional development activities (e.g., conferences, research, painting) ______

B) If your program has a special time in the year set aside for faculty development (e.g., a reading period), what were you able to accomplish during the most recent one?

______

23. How much anxiety do you now have over your long-term future career?

almost none ( ) a little anxiety ( ) some anxiety ( ) I am quite anxious ( ) I am extremely anxious ( )

Reasons? ______

24. Do you think the individualized education experience in this program will increase your "salability" in the academic market place? No ____ Yes ____

Reasons? ______

25. Since coming to the program (but within the last two years), have you received an offer of another job or a serious inquiry about your availability?

yes, an offer ( ) not an offer, but a serious inquiry ( ) neither ( )

26. Please indicate the effect that working in the program has had on you in each of the following areas:

	Level of Effect				
Areas	Much More Now	Some More Now	About the Same	Somewhat Less Now	Much Less Now
a) interest in working with students who are studying independently	( )	( )	( )	( )	( )
b) interest in nontraditional modes of learning	( )	( )	( )	( )	( )
c) skepticism about the credibility of programs such as this one	( )	( )	( )	( )	( )
d) interest in working with older students	( )	( )	( )	( )	( )
e) concern about the faculty effort necessary for the successful conduct of individualized programs	( )	( )	( )	( )	( )
f) interest in rethinking my disciplinary specialization	( )	( )	( )	( )	( )
g) interest in doing interdisciplinary work	( )	( )	( )	( )	( )

IV. SOME DEMOGRAPHY

27. Your age ______
28. Your sex ______
29. Your highest degree ______
30. Your academic speciality ______

V. COMMENTS

31. Do you have anything to add (comments about the program? This questionnaire? etc.)? ______

Office of Research and Evaluation
Empire State College
State University of New York
One Union Avenue
Saratoga Springs, NY 12866-4309